

# **NOAA Technical Memorandum NMFS**



**MAY 2001**

## **SUMMARY OF SEABIRD, MARINE TURTLE, AND SURFACE FAUNA DATA COLLECTED DURING A SURVEY IN THE EASTERN TROPICAL PACIFIC OCEAN, JULY 28 - DECEMBER 9, 2000**

Paula A. Olson  
Robert L. Pitman  
Lisa T. Ballance  
Kathryn R. Hough  
Peter H. Dutton  
Stephen B. Reilly

**NOAA-TM-NMFS-SWFSC-304**

**U.S. DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
National Marine Fisheries Service  
Southwest Fisheries Science Center**

**The National Oceanic and Atmospheric Administration (NOAA), organized in 1970, has evolved into an agency which establishes national policies and manages and conserves our oceanic, coastal, and atmospheric resources. An organizational element within NOAA, the Office of Fisheries is responsible for fisheries policy and the direction of the National Marine Fisheries Service (NMFS).**

**In addition to its formal publications, the NMFS uses the NOAA Technical Memorandum series to issue informal scientific and technical publications when complete formal review and editorial processing are not appropriate or feasible. Documents within this series, however, reflect sound professional work and may be referenced in the formal scientific and technical literature.**



## **NOAA Technical Memorandum NMFS**

This TM series is used for documentation and timely communication of preliminary results, interim reports, or special purpose information. The TMs have not received complete formal review, editorial control, or detailed editing.

**MAY 2001**

# **SUMMARY OF SEABIRD, MARINE TURTLE, AND SURFACE FAUNA DATA COLLECTED DURING A SURVEY IN THE EASTERN TROPICAL PACIFIC OCEAN, JULY 28 - DECEMBER 9, 2000**

Paula A. Olson, Robert L. Pitman, Lisa T. Ballance,  
Kathryn R. Hough, Peter H. Dutton, Stephen B. Reilly

National Oceanic and Atmospheric Administration  
National Marine Fisheries Service  
Southwest Fisheries Science Center  
8604 La Jolla Shores Drive  
La Jolla, California, USA 92037

**NOAA-TM-NMFS-SWFSC-304**

### **U.S. DEPARTMENT OF COMMERCE**

Donald L. Evans, Secretary

### **National Oceanic and Atmospheric Administration**

Scott B. Gudes, Acting Under Secretary for Oceans and Atmosphere

### **National Marine Fisheries Service**

William T. Hogarth, Acting Assistant Administrator for Fisheries



## CONTENTS

List of Tables .....	ii
List of Figures .....	iii
Introduction.....	1
Objectives .....	1
Study Area and Itinerary .....	2
Methods.....	3
Seabirds.....	3
Sea Turtles .....	3
Flyingfish .....	3
Marine Insects.....	4
Results .....	4
Seabirds .....	4
Sea Turtles .....	4
Flyingfish .....	5
Marine Insects.....	5
Acknowledgements .....	5
Literature Cited .....	5
Tables .....	7
Figures .....	46
Appendix 1 .....	57

## LIST OF TABLES

Table 1.	Identity and numbers of seabirds recorded from the <i>Jordan</i> , 29 July – 9 December 2000 .....	7
Table 2.	Identity and numbers of seabirds recorded from the <i>McArthur</i> , 28 July – 9 December 2000 .....	10
Table 3.	Captured sea turtles released with satellite tags from the <i>Jordan</i> in 2000.....	14
Table 4.	Identity and numbers of flyingfish sighted from the flying bridge of the <i>Jordan</i> , 29 July – 9 December 2000 .....	15
Table 5.	Identity and numbers of flyingfish sighted from the flying bridge of the <i>McArthur</i> , 28 July – 9 December 2000 .....	16
Table 6.	Results of night-light dipnet sampling, <i>Jordan</i> , 29 July – 9 December 2000 .....	17
Table 7.	Results of night-light dipnet sampling, <i>McArthur</i> , 28 July – 9 December 2000 ...	35
Table 8.	Sea striders ( <i>Halobates</i> spp.) collected from the <i>Jordan</i> and the <i>McArthur</i> , 28 July – 9 December 2000 .....	45

## LIST OF FIGURES

Figure 1.	Tracklines, <i>Jordan</i> , 29 July – 9 December 2000 .....	46
Figure 2.	Tracklines, <i>McArthur</i> , 28 July – 9 December 2000 .....	47
Figure 3.	Locations of olive ridley turtle ( <i>Lepidochelys olivacea</i> ) sightings recorded from the <i>Jordan</i> and the <i>McArthur</i> , 28 July – 9 December 2000 .....	48
Figure 4.	Locations of loggerhead turtle ( <i>Caretta caretta</i> ), green turtle ( <i>Chelonia mydas</i> ), and hawksbill turtle ( <i>Eretmochelys imbricata</i> ) sightings recorded from the <i>Jordan</i> and the <i>McArthur</i> , 28 July – 9 December 2000 .....	49
Figure 5.	Locations of unidentified hardshell turtles (Cheloniidae) and unidentified sea turtles sighted from the <i>Jordan</i> and the <i>McArthur</i> , 28 July – 9 December 2000 .....	50
Figure 6.	Locations of dipnet stations, <i>Jordan</i> , 29 July – 9 December 2000 .....	51
Figure 7.	Locations of dipnet stations, <i>McArthur</i> , 28 July – 9 December 2000 .....	52
Figure 8.	Locations of <i>Halobates sobrinus</i> collected from the <i>Jordan</i> and the <i>McArthur</i> , 28 July – 9 December 2000 .....	53
Figure 9.	Locations of <i>Halobates micans</i> collected from the <i>Jordan</i> and the <i>McArthur</i> , 28 July – 9 December 2000 .....	54
Figure 10.	Locations of <i>Halobates sericeus</i> collected from the <i>Jordan</i> and the <i>McArthur</i> , 28 July – 9 December 2000 .....	55
Figure 11.	Locations of <i>Halobates splendens</i> collected from the <i>Jordan</i> and the <i>McArthur</i> , 28 July – 9 December 2000 .....	56



**SUMMARY OF SEABIRD, MARINE TURTLE, AND SURFACE FAUNA DATA  
COLLECTED DURING A SURVEY IN THE EASTERN TROPICAL PACIFIC OCEAN  
JULY 28 – DECEMBER 9, 2000**

Paula A. Olson, Robert L. Pitman, Lisa T. Ballance,  
Kathryn R. Hough, Peter H. Dutton, and Stephen B. Reilly

**INTRODUCTION**

In 1997, with the passage of the International Dolphin Conservation Program Act (Public Law 105-42), Congress directed the National Marine Fisheries Service to determine if the tuna purse-seine fishery in the eastern tropical Pacific (ETP) is having a significant adverse impact on depleted dolphin stocks. To aid in this determination, Congress mandated that dolphin population surveys be undertaken in each of the calendar years 1998, 1999, and 2000. The primary objective of these surveys was to estimate the absolute abundance of the dolphin populations, while the secondary objective was to collect additional data in order to characterize biological and physical features of the ETP pelagic ecosystem.

The Southwest Fisheries Science Center (SWFSC) conducted the third of the surveys, known as *Stenella* Abundance Research (STAR00), from July - December 2000. The survey was conducted using two research vessels: the NOAA Ship *McArthur* and the NOAA Ship *David Starr Jordan* (hereafter referred to as the *Jordan*). This report summarizes procedures used and data collected for seabirds, sea turtles, flyingfish, and marine insects during the 2000 survey. Separate reports summarize the marine mammal, oceanographic, and net tow data (Kinney *et al.*, 2001; Philbrick *et al.*, in prep; SWFSC Tech. Memo, in prep; respectively). Data on seabirds, sea turtles, flyingfish, and marine insects collected during the first and second surveys, in 1998 and 1999, are reported in Olson *et al.* (2000, 2001).

Data on seabirds, marine turtles, and surface fauna have been collected during dolphin surveys conducted by SWFSC in the ETP since the mid-1970's. These data have been used to investigate cetacean habitat relationships (Au and Perryman 1985), seabird foraging (Au and Pitman 1986, Pitman and Ballance 1990, 1992; Pitman 1993), seabird community ecology (Ballance *et al.* 1997), and marine turtle abundance (Beavers and Ramsey 1998). For an expanded bibliography, see  
[<<http://swfsc.nmfs.noaa.gov/mmd/ecology/ecology.html>>](http://swfsc.nmfs.noaa.gov/mmd/ecology/ecology.html).

**OBJECTIVES**

Studies of seabirds, marine turtles, and surface fauna, in conjunction with the dolphin sighting survey, will aid in understanding the ETP ecosystem and how variation within the system may affect the distribution and abundance of dolphins.

## STUDY AREA AND ITINERARY

The study area extended from 33°N to 18°S and from the continental shores of the Americas to 153°W. Tracklines were designed to systematically sample the study area using line-transect methods to estimate dolphin abundance (Figures 1 and 2).

The survey was conducted from July 28 to December 9, 2000. It was composed of five legs on the *McArthur* and six legs on the *Jordan*. Survey legs varied between 16 and 30 days in length, separated by 3 to 6 days in port. Itineraries are listed below. Scientific personnel are listed in Appendix 1.

### NOAA Ship *McArthur*:

	28 JUL	Depart San Diego, CA
28 JUL - 25 AUG		Leg I
25 AUG - 30 AUG		Honolulu, Hawaii
30 AUG - 29 SEP		Leg II
29 SEP - 05 OCT		Puntarenas, Costa Rica
05 OCT - 25 OCT		Leg III
25 OCT - 29 OCT		Callao, Peru
29 OCT - 14 NOV		Leg IV
14 NOV - 18 NOV		Panama City, Panama
18 NOV - 09 DEC		Leg V
09 DEC		Arrive San Diego, CA

### NOAA Ship *David Starr Jordan*:

	29 JUL	Depart San Diego, CA
29 JUL - 16 AUG		Leg I
16 AUG - 19 AUG		Manzanillo, Mexico
19 AUG - 08 SEP		Leg II
08 SEP - 12 SEP		Acapulco, Mexico
12 SEP - 01 OCT		Leg III
01 OCT - 05 OCT		Puntarenas, Costa Rica
05 OCT - 23 OCT		Leg IV
23 OCT - 29 OCT		Puerto Quetzal, Guatemala
29 OCT - 16 NOV		Leg V
16 NOV - 20 NOV		Manzanillo, Mexico
20 NOV - 09 DEC		Leg VI
09 DEC		Arrive San Diego, CA

## METHODS

### Seabirds

A seabird census was conducted using standard 300-meter strip-transect methods. Bird observers stood shifts on the flying bridge throughout daylight hours when the ship was underway, weather permitting. Distance within 300 meters, species identification, number, and behavior of birds were recorded, as well as associations with marine mammals, fish, or flotsam. Distance was estimated with a fixed-interval range finder. Hand-held binoculars were used to confirm species identification.

A separate census of feeding flocks was conducted using modified strip-transect methods. Mammal observers using 25X binoculars to detect marine mammals reported the presence of all feeding flocks out to 4.5 kilometers (one binocular reticle). Seabird observers then quantified flock size and species composition.

### Sea Turtles

Sightings of sea turtles by mammal and seabird observers were recorded in the marine mammal data file. Sightings were made with 25X binoculars, hand-held binoculars, and unaided eye. Angle, distance, species identification, number, approximate size, and association with flotsam were recorded.

Live turtles were captured opportunistically for biological sampling. Turtles were caught by hand from an inflatable boat deployed from the ship. Behavior at the time of capture was noted. Captured turtles were measured, weighed, and flipper-tagged. Blood and/or skin samples for genetic studies were collected. On the *Jordan*, selected turtles were lavaged to sample stomach contents. Using a portable scanner, ultrasound scans were performed on adult females to determine reproductive status. Satellite tags were attached to a few turtles to track movements and to determine dive patterns. All turtles were subsequently released unharmed.

### Flyingfish

A visual survey for flyingfish was conducted using modified strip-transect methods; all fish flushed within 100 meters of the ship were recorded. The survey was conducted by the seabird observers, concurrently with the survey for seabirds.

Surface organisms were collected every evening during a one-hour dipnet station to collect information on the relative abundance and distribution of flyingfish. The station began approximately one hour after sunset. One or two 500-watt lamps were suspended over the side of the ship to attract animals and two persons using long-handled nets collected them. Occasionally a dipnet station would also be conducted in the morning one or two hours before sunrise. Information recorded during these stations included species observed, relative abundance, and environmental data (e.g. sea surface temperature and salinity, Beaufort state, and moon phase).

## Marine Insects

Sea striders (*Halobates* spp.) were collected opportunistically during the evening dipnet station using a long-handled net.

## **RESULTS**

### Seabirds

A total of 1,884.6 hours during 227 days was spent on-effort for the seabird survey conducted from the two ships. During this time a total of 104 species were recorded from the *Jordan* (Table 1) and the *McArthur* (Table 2).

Abundance of seabirds varied by ship and leg (Tables 1 and 2). The most abundant seabirds were represented by the families Procellariidae (especially Juan Fernandez Petrels and Wedge-tailed Shearwaters) and Sternidae (predominantly Sooty Terns). Species belonging to the genera *Sula*, *Phalaropus*, and *Oceanodroma* were also abundant.

### Sea Turtles

Sea turtles sighted from the flying bridges of the *Jordan* and the *McArthur* totaled 940. This included 439 *Lepidochelys olivacea* (olive ridley), 22 *Caretta caretta* (loggerhead), 6 *Chelonia mydas* (green), 1 *Eretmochelys imbricata* (hawksbill), 470 unidentified hardshell turtles (family Cheloniidae), and 2 unidentified turtles. Figures 3, 4, and 5 illustrate the distribution of sea turtle sightings in the study area. *Lepidochelys olivacea* were sighted predominantly north of the Equator; *Caretta caretta* were seen southwest of Baja California and off the coast of Central America; *Chelonia mydas* were observed southwest of Baja and off Peru; and the single *Eretmochelys imbricata* was seen in Mexican coastal waters.

A total of 226 sea turtles were captured, sampled, and released: 207 *Lepidochelys olivacea*, 12 *Caretta caretta*, and 7 *Chelonia mydas*. (Some sampled turtles were not sighted from the flying bridge.) One of the *Caretta caretta* carried a flipper tag from an aquarium in Japan.

Flipper tags were attached to 219 turtles. Blood samples were collected from 168 turtles; skin samples from 11 turtles; and a fecal sample from 1 turtle. Twenty-four turtles were lavaged for stomach samples. Results of the stomach sampling are reported in Kopitsky, Pitman, and Dutton (in press).

Satellite transmitters (Wildlife Computers SDRT10) recording dive data and location were attached to 5 *Caretta caretta*, 2 *Chelonia mydas*, and 1 *Lepidochelys olivacea* (Table 3). After tagging, the *Caretta caretta* continued moving in waters west and/or south of the Baja California peninsula. The juvenile *Chelonia mydas* was tracked from the open ocean into coastal waters along Baja where it entered San Ignacio Lagoon, a known foraging area for this species. The female *Lepidochelys olivacea* spent two months close to shore at Escobilla, Mexico, possibly laying eggs at the nesting beach there.

### Flyingfish

Over 147,000 flyingfish were sighted from the *Jordan* and the *McArthur* (Tables 4 and 5). Flyingfish of five genera were recorded, the most abundant represented by *Exocoetus*.

The locations of the 285 dipnet stations for the *Jordan* and the *McArthur* are shown in Figures 6 and 7, respectively. A total of 2,861 flyingfish was collected. Data and specimens collected during the stations are listed in Tables 6 (*Jordan*) and 7 (*McArthur*).

### Marine Insects

A total of 11,161 individual *Halobates* was collected during 231 of the dipnet stations. Four species were sampled (Table 10). Locations are shown in Figures 10, 11, 12, and 13. *H. sobrinus* and *H. micans* were the two most abundant species. *H. sobrinus* were collected within a few hundred miles of the coast and *H. micans* were found primarily offshore in the North Equatorial Countercurrent.

### **ACKNOWLEDGMENTS**

We are grateful to the many people who contributed to the success of this survey. We especially thank the following persons, whose efforts made this project possible: the officers and crew of the NOAA Ships *David Starr Jordan* and *McArthur*; the staff at the Southwest Fisheries Science Center including LT Anne Nimershiem, the project's on-shore survey coordinator; the staff of the Pacific Marine Center; and the bird observers, marine mammal observers, oceanographers, and other cruise participants who collected data. Dr. Lanna Cheng of Scripps Institution of Oceanography identified all of the *Halobates* specimens. John Brandon and Denise Parker contributed programming and data extraction for this report. Robert Holland prepared the turtle and insect plots. We thank Dr. Tim Gerrodette, Dr. Paul Fiedler, and Valerie Philbrick for reviewing this manuscript.

### **LITERATURE CITED**

- Au, D.W.K., and W.L. Perryman. 1985. Dolphin habitats in the eastern tropical Pacific. Fishery Bulletin, U.S. 83: 623-643.
- Au, D.W.K., and R.L. Pitman. 1986. Seabird interactions with dolphins and tuna in the eastern tropical Pacific. Condor 88: 304-317.
- Ballance, L.T., R.L. Pitman, and S.B. Reilly. 1997. Seabird community structure along a productivity gradient: importance of competition and energetic constraint. Ecology 78: 1502-1518.

Beavers, S.C. and F. L. Ramsey. 1998. Detectability analysis in transect surveys. *Journal of Wildlife Management* 62(3): 948-957.

Ictyoplankton and station data for surface and bongo tows taken during a survey in the eastern tropical Pacific July 28 – December 9, 2000. In prep. Southwest Fisheries Science Center, NOAA Tech. Memo.

Kinzey, D., T. Gerrodette, A. Dizon, W. Perryman, P. Olson, and S. Rankin. 2001. Marine mammal data collected during a survey in the eastern tropical Pacific Ocean aboard the NOAA ships *McArthur* and *David Starr Jordan*, July 28 – December 9, 2000. Southwest Fisheries Science Center NOAA Tech. Memo 303.

Kopitsky, K., R.L. Pitman, and P.H. Dutton. In press. Aspects of olive ridley feeding ecology in the eastern tropical Pacific. *Proceedings of the 21st Annual Symposium on Sea Turtle Biology and Conservation*. NOAA Tech. Memo.

Olson, P.A., R.L. Pitman, L.T. Ballance, K.R. Hough, P. Dutton, and S.B. Reilly. 2001. Summary of seabird, marine turtle, and surface fauna data collected during a survey in the eastern tropical Pacific Ocean July 28 – December 9, 1999. Southwest Fisheries Science Center NOAA Tech. Memo. 301.

Olson, P.A., R.L. Pitman, L.T. Ballance, and S.B. Reilly. 2000. Summary of seabird, marine turtle, and surface fauna data collected during a survey in the eastern tropical Pacific Ocean July 30 – December 9, 1998. Southwest Fisheries Science Center NOAA Tech. Memo. 298.

Philbrick, V., P. Fiedler, J. Fluty, and S. Reilly. In prep. Report of oceanographic studies conducted during the 2000 eastern tropical Pacific survey on the research vessels *McArthur* and *David Starr Jordan*. Southwest Fisheries Science Center, NOAA Tech. Memo.

Pitman, R.L. 1993. Seabird associations with marine turtles in the eastern Pacific. *Colonial Waterbirds* 16(2): 194-201.

Pitman, R.L., and L.T. Ballance. 1990. Daytime feeding Leach's Storm-Petrel on a midwater fish, *Vinciguerria lucetia*, in the eastern tropical Pacific. *Condor* 92: 524-527.

Pitman, R.L., and L.T. Ballance. 1992. Parkinson's Petrel distribution and foraging ecology in the eastern tropical Pacific: aspects of an exclusive feeding relationship with dolphins. *Condor* 94: 824-834.

Table 1. Identity and numbers of seabirds recorded from the *Jordan*, 29 July – 9 December 2000.

Common Name	Scientific Name	Leg I	Leg II	Leg III	Leg IV	Leg V	Leg VI	Total
Juan Fernandez Petrel	<i>Pterodroma externa</i>	4	3501	3817	2	519	48	7891
Sooty Tern	<i>Sterna fuscata</i>	77	910	438	19	539	1005	2988
Wedge-tailed Shearwater (dark morph)	<i>Puffinus pacificus</i>	11	1372	1347	16	59	95	2900
Wedge-rumped (Galápagos) Storm-petrel	<i>Oceanodroma tethys</i>	2340	41	147	105	16	7	2656
Brown Booby	<i>Sula leucogaster</i>	863	138	180	280	429	198	2088
Black Tern	<i>Chlidonias niger</i>	188	218	101	1126	49	34	1716
Wedge-tailed Shearwater (light morph)	<i>Puffinus pacificus</i>	16	255	217	389	327	328	1532
Black Storm-petrel	<i>Oceanodroma Melania</i>	1252	15	73	5	17	3	1365
Sooty Shearwater	<i>Puffinus griseus</i>	1204	0	0	0	8	35	1247
Red-footed Booby	<i>Sula sula</i>	316	434	76	228	55	129	1238
Pink-footed Shearwater	<i>Puffinus creatopus</i>	882	78	48	96	52	19	1175
Leach's Storm-petrel (white-rumped)	<i>Oceanodroma leucorhoa</i>	32	105	79	74	308	439	1037
Red-necked (Northern) Phalarope	<i>Phalaropus lobatus</i>	535	12	72	35	134	0	788
Red Phalarope	<i>Phalaropus fulicarius</i>	286	211	55	58	68	31	709
Audubon's Shearwater	<i>Puffinus lherminieri</i>	512	0	114	26	38	0	690
Magnificent Frigatebird	<i>Fregata magnificens</i>	551	1	67	17	0	3	639
Masked Booby	<i>Sula dactylatra</i>	24	167	97	11	220	104	623
Arctic Tern	<i>Sterna paradisaea</i>	6	92	51	147	8	0	304
Nazca Booby	<i>Sula granti</i>	0	65	67	137	10	4	283
Pomarine Jaeger	<i>Stercorarius pomarinus</i>	10	26	23	92	52	46	249
Least Storm-petrel	<i>Oceanodroma microsoma</i>	85	5	18	7	55	3	173
Heermann's Gull	<i>Larus heermanni</i>	153	0	0	0	0	3	156
Tahiti Petrel	<i>Pseudobulweria rostrata</i>	0	42	58	33	20	2	155
Brown Pelican	<i>Pelecanus occidentalis</i>	91	0	0	16	0	0	107
Leach's Storm-petrel (dark-rumped)	<i>Oceanodroma leucorhoa</i>	63	0	0	11	22	6	102
Townsend's Shearwater	<i>Puffinus auricularis</i>	53	26	1	1	3	12	96
Masked/Nazca Booby	<i>Sula dactylatra/granti</i>	2	9	51	21	9	1	93
Passerines		6	1	31	35	17	1	91
Sabine's Gull	<i>Larus sabini</i>	37	1	6	17	24	0	85
Black-vented Shearwater	<i>Puffinus opisthomelas</i>	79	0	1	0	2	0	82
Western Gull	<i>Larus occidentalis</i>	71	0	0	0	0	3	74

Table 1. (*Jordan* seabirds) continued.

Common Name	Scientific Name	Leg I	Leg II	Leg III	Leg IV	Leg V	Leg VI	Total
Franklin's Gull	<i>Larus pipixcan</i>	0	0	0	71	0	0	71
Red-billed Tropicbird	<i>Phaethon aethereus</i>	6	13	8	15	12	12	66
Brown Noddy	<i>Anous stolidus</i>	41	0	0	3	18	0	62
Shorebirds		20	6	2	34	0	0	62
White Tern	<i>Gygis alba</i>	0	2	2	43	10	5	62
Wedge-tailed Shearwater (unidentified morph)	<i>Puffinus pacificus</i>	0	0	26	0	25	6	57
Leach's Storm-petrel (intermediate-rumped)	<i>Oceanodroma leucorhoa</i>	8	3	1	0	3	33	48
California Gull	<i>Larus californicus</i>	0	0	0	0	0	44	44
Christmas Island Shearwater	<i>Puffinus nativitatis</i>	1	23	8	6	3	0	41
Least Tern	<i>Sterna antillarum</i>	13	1	8	5	13	0	40
Urid Frigatebird	<i>Fregata spp.</i>	0	0	21	10	2	4	37
Markham's Storm-petrel	<i>Oceanodroma markhami</i>	0	3	8	1	24	0	36
Parasitic Jaeger	<i>Stercorarius parasiticus</i>	1	0	3	7	13	12	36
White-winged Petrel	<i>Pterodroma leucoptera</i>	0	24	5	0	7	0	36
Leach's Storm-petrel (unidentified morph)	<i>Oceanodroma leucorhoa</i>	6	0	0	0	25	4	35
Cook's Petrel	<i>Pterodroma cookii</i>	1	14	0	0	3	16	34
Long-tailed Jaeger	<i>Stercorarius longicaudus</i>	2	12	17	3	0	0	34
Common Tern	<i>Sterna hirundo</i>	14	0	2	12	4	0	32
Great Frigatebird	<i>Fregata minor</i>	0	9	3	13	1	3	29
Bridled Tern	<i>Sterna anaethetus</i>	20	2	1	5	0	0	28
Red-tailed Tropicbird	<i>Phaethon rubricauda</i>	0	9	0	0	7	9	25
Arctic/Common Tern	<i>Sterna paradisaea/hirundo</i>	2	0	0	2	8	12	24
Parkinson's Petrel	<i>Procellaria parkinsoni</i>	0	0	1	21	0	0	22
Craveri's Murrelet	<i>Synthliboramphus craveri</i>	15	0	0	0	0	0	15
Kermadec Petrel (dark morph)	<i>Pterodroma neglecta</i>	0	10	3	1	0	1	15
Black-footed Albatross	<i>Diomedea nigripes</i>	14	0	0	0	0	0	14
Wedge-tailed Shearwater (intermediate morph)	<i>Puffinus pacificus</i>	0	0	1	1	4	7	13
Laughing Gull	<i>Larus atricilla</i>	4	0	0	3	4	1	12
Xantus' Murrelet	<i>Synthliboramphus hypoleucus</i>	10	0	0	0	0	0	10
Elegant Tern	<i>Sterna elegans</i>	0	0	2	7	0	0	9
Bulwer's Petrel	<i>Bulweria bulwerii</i>	0	8	0	0	0	0	8

Table 1. (*Jordan* seabirds) continued.

Common Name	Scientific Name	Leg I	Leg II	Leg III	Leg IV	Leg V	Leg VI	Total
Hawaiian/Dark-rumped Petrel	<i>Pterodroma sandwichensis/phaeopygia</i>	0	1	0	1	6	0	8
Northern Fulmar (dark morph)	<i>Fulmarus glacialis</i>	0	0	0	0	0	8	8
Blue-footed Booby	<i>Sula dactylatra</i>	6	0	1	0	0	0	7
Kermadec Petrel (intermediate morph)	<i>Pterodroma neglecta</i>	0	4	1	0	0	1	6
Raptors		1	0	0	5	0	0	6
South Polar Skua	<i>Stercorarius maccormickii</i>	3	2	1	0	0	0	6
Xantus' Craveri's Murrelet	<i>Synthliboramphus hypoleuca/craveri</i>	6	0	0	0	0	0	6
Kermadec Petrel	<i>Pterodroma neglecta</i>	0	0	0	0	0	0	6
Royal Tern	<i>Sterna maxima</i>	1	0	0	3	0	0	5
Brandt's Cormorant	<i>Phalacrocorax penicillatus</i>	3	0	0	0	0	0	4
Black-winged Petrel	<i>Pterodroma nigripennis</i>	0	2	0	0	0	0	3
Cassin's Auklet	<i>Pygocampa aleuticus</i>	2	0	0	0	0	0	2
Double-crested Cormorant	<i>Phalacrocorax auritus</i>	2	0	0	0	0	0	2
Harcourt's (Band-rumped) Storm-petrel	<i>Oceanodroma castro</i>	0	0	0	0	0	0	2
Black Noddy	<i>Anous minutus</i>	0	0	0	2	0	0	2
Buller's Shearwater (New Zealand Shearwater)	<i>Puffinus bulleri</i>	0	0	0	1	0	0	1
Northern Fulmar (light morph)	<i>Fulmarus glacialis</i>	0	0	0	0	0	1	1
Swallow-tailed Gull	<i>Larus furcatus</i>	0	0	0	1	0	1	1
White-chinned Petrel	<i>Procellaria aequinoctialis</i>	0	0	1	0	0	0	1
<b>Totals</b>		<b>9951</b>	<b>7873</b>	<b>7361</b>	<b>3280</b>	<b>3257</b>	<b>2739</b>	<b>34461</b>

Table 2. Identity and numbers of seabirds recorded from the *McArthur*, 28 July – 9 December 2000.

Common Name	Scientific Name	Leg I	Leg II	Leg III	Leg IV	Leg V	Total
Sooty Tern	<i>Sterna fuscata</i>	5254	6053	435	0	597	12339
Red Phalarope	<i>Phalaropus fulicarius</i>	1	18	13	7013	180	7225
Blue-footed Booby	<i>Sula dactylatra</i>	0	0	0	3885	0	3885
Wedge-tailed Shearwater (dark morph)	<i>Puffinus pacificus</i>	2378	161	0	0	31	2570
Juan Fernandez Petrel	<i>Pterodroma externa</i>	1794	457	54	0	34	2339
Wedge-tailed Shearwater (light morph)	<i>Puffinus pacificus</i>	273	592	92	0	993	1950
Peruvian Booby	<i>Sula variegata</i>	0	0	0	1891	0	1891
Red-footed Booby	<i>Sula sula</i>	2	73	1048	9	305	1437
Leach's Storm-petrel (white-rumped)	<i>Oceanodroma leucorhoa</i>	188	126	282	3	447	1046
Red-necked (Northern) Phalarope	<i>Phalaropus lobatus</i>	0	3	11	797	14	825
Brown Booby	<i>Sula leucogaster</i>	1	113	71	362	191	738
Black Tern	<i>Chlidonias niger</i>	0	0	6	704	5	715
Wedge-rumped (Galápagos) Storm-petrel	<i>Oceanodroma tethys</i>	59	77	439	82	15	672
Arctic Tern	<i>Sterna paradisea</i>	0	146	251	197	3	597
Audubon's Shearwater	<i>Puffinus lherminieri</i>	0	5	4	470	3	482
White Tern	<i>Gygis alba</i>	19	102	266	0	66	453
Brown Pelican	<i>Pelecanus occidentalis</i>	0	0	0	55	361	416
Markham's Storm-petrel	<i>Oceanodroma markhami</i>	0	0	93	294	0	387
White-vented Storm-petrel	<i>Oceanites gracilis</i>	0	0	0	347	0	347
Pink-footed Shearwater	<i>Puffinus creatopus</i>	18	151	17	117	30	333
Guanay Cormorant	<i>Phalacrocorax bougainvillii</i>	0	0	0	314	0	314
Bonaparte's Gull	<i>Larus philadelphicus</i>	0	0	1	0	250	251
Brown Noddy	<i>Anous stolidus</i>	0	6	46	140	51	243
Chilean Pelican	<i>Pelecanus thagus</i>	0	0	0	198	0	198
Hornby's Storm-petrel	<i>Oceanodroma hornbyi</i>	0	0	55	139	0	194
Pomarine Jaeger	<i>Stercorarius pomarinus</i>	7	14	15	129	21	186
White-winged Petrel	<i>Pterodroma leucoptera</i>	29	140	14	0	0	183
Sooty Shearwater	<i>Puffinus griseus</i>	0	4	3	165	10	182
Nazca Booby	<i>Sula granti</i>	0	5	57	93	15	170
Laughing Gull	<i>Larus atricilla</i>	0	0	152	6	8	166
Parasitic Jaeger	<i>Stercorarius parasiticus</i>	6	21	57	57	23	164
Sabine's Gull	<i>Larus sabini</i>	0	0	2	156	2	160

Table 2. (*McArthur* seabirds) continued.

Common Name	Scientific Name	Leg I	Leg II	Leg III	Leg IV	Leg V	Total
Masked Booby	<i>Sula dactylatra</i>	27	7	35	4	75	148
Waved Albatross	<i>Diomedea irrorata</i>	0	0	3	144	0	147
Magnificent Frigatebird	<i>Fregata magnificens</i>	0	9	15	109	3	136
Inca Tern	<i>Larosterna inca</i>	0	0	0	126	0	126
Hawaiian/Dark-rumped Petrel	<i>Pterodroma sandvicensis/phaeopygia</i>	6	6	88	2	1	103
White-chinned Petrel	<i>Procellaria aequinoctialis</i>	0	0	5	91	0	96
Wedge-tailed Shearwater (unidentified morph)	<i>Puffinus pacificus</i>	0	0	0	0	95	95
Elegant Tern	<i>Sterna elegans</i>	0	0	0	0	83	4
Great Frigatebird	<i>Fregata minor</i>	12	13	16	2	41	87
Franklin's Gull	<i>Larus pipixcan</i>	0	0	0	80	1	81
Masked/Nazca Booby	<i>Sula dactylatra/granti</i>	0	0	15	43	23	81
Olivaceous Cormorant	<i>Phalacrocorax olivaceus</i>	0	0	0	76	0	76
Swallow-tailed Gull	<i>Larus furcatus</i>	0	0	8	62	0	70
Black-winged Petrel	<i>Pterodroma nigripennis</i>	43	22	0	0	0	65
Christmas Island Shearwater	<i>Puffinus nativitatis</i>	32	22	5	0	0	65
Tahiti Petrel	<i>Pseudobulweria rostrata</i>	38	23	0	0	0	65
Common Tern	<i>Sterna hirundo</i>	0	0	13	48	1	62
Harcourt's (Band-rumped) Storm-petrel	<i>Oceanodroma castro</i>	5	17	26	1	12	61
Phoenix Petrel	<i>Pterodroma alba</i>	23	36	0	0	0	65
Cook's Petrel	<i>Pterodroma cookii</i>	33	11	8	0	0	59
Kelp Gull	<i>Larus dominicanus</i>	0	0	0	51	0	52
Kermadec Petrel	<i>Pterodroma neglecta</i>	19	17	14	0	1	51
Unid. Frigatebird	<i>Fregata spp.</i>	3	2	34	0	8	47
Stejneger's Petrel	<i>Pterodroma longirostris</i>	0	43	2	0	0	45
Arctic/Common Tern	<i>Sterna paradisaea/hirundo</i>	0	0	44	0	0	44
Wedge-tailed Shearwater (intermediate morph)	<i>Puffinus pacificus</i>	16	24	0	0	1	41
Bulwer's Petrel	<i>Bulweria bulwerii</i>	34	6	0	0	0	40
Red-tailed Tropicbird	<i>Phaethon rubricauda</i>	14	11	3	0	11	39
Peruvian Tern	<i>Sterna lorata</i>	0	0	0	34	0	34
Buller's (New Zealand) Shearwater	<i>Puffinus bulleri</i>	3	30	0	0	0	33
Shorebirds		5	19	5	4	0	33
Parkinson's Petrel	<i>Procellaria parkinsoni</i>	0	1	6	24	0	31

Table 2. (*McArthur* seabirds) continued.

Common Name	Scientific Name	Leg I	Leg II	Leg III	Leg IV	Leg V	Total
White-bellied Storm-petrel	<i>Fregetta grallaria</i>	0	7	24	0	0	31
Black-vented Shearwater	<i>Puffinus opisthomelas</i>	1	0	0	0	29	30
Red-billed Tropicbird	<i>Phaethon aethereus</i>	0	4	6	18	2	30
Leach's Storm-petrel (intermediate-rumped)	<i>Oceanodroma leucorhoa</i>	20	1	4	0	2	27
Pycroft's Petrel	<i>Pterodroma pycrofti</i>	16	11	0	0	0	27
Western Gull	<i>Larus occidentalis</i>	1	0	0	0	24	25
Passerines		0	3	3	14	4	24
Cape Petrel	<i>Daption capense</i>	0	0	9	14	0	23
Northern Fulmar (dark morph)	<i>Fulmarus glacialis</i>	0	0	0	0	22	22
California Gull	<i>Larus californicus</i>	0	0	0	0	21	21
Long-tailed Jaeger	<i>Stercorarius longicaudus</i>	3	7	5	4	2	21
Black Storm-petrel	<i>Oceanodroma Melania</i>	0	1	2	7	5	15
Leach's Storm-petrel (dark-rumped)	<i>Oceanodroma leucorhoa</i>	6	0	4	1	4	15
Defilippe's Petrel	<i>Pterodroma defilippiana</i>	0	0	14	0	0	14
Least Storm-petrel	<i>Oceanodroma microsoma</i>	0	0	3	3	8	14
Collared Petrel	<i>Pterodroma brevipes</i>	8	3	0	0	0	11
Newell's Shearwater	<i>Puffinus newelli</i>	9	2	0	0	0	11
Royal Tern	<i>Sterna maxima</i>	0	3	2	4	1	10
Raptors		0	0	0	7	2	9
Black Noddy	<i>Anous minutus</i>	4	1	0	0	3	8
Tahiti/Phoenix Petrel	<i>Pterodroma rostrata/alba</i>	4	4	0	0	0	8
Bridled Tern	<i>Sterna anaethetus</i>	0	0	0	6	1	7
Heermann's Gull	<i>Larus heermanni</i>	2	0	0	0	5	7
White-faced Storm-petrel	<i>Pelagodroma marina</i>	0	2	5	0	0	7
Murphy's Petrel	<i>Pterodroma ultima</i>	0	1	5	0	0	6
Unid. Prion	<i>Pachyptila sp.</i>	0	0	6	0	0	6
White-throated Storm-petrel	<i>Neofregata albicularis</i>	0	4	1	0	0	5
Wilson's Storm-petrel	<i>Oceanites oceanicus</i>	0	1	1	2	1	5
Henderson Petrel	<i>Pterodroma atrata</i>	1	2	1	0	0	4
Peruvian Diving Petrel	<i>Pelecanoides garnotii</i>	0	0	0	4	0	4
White-tailed Tropicbird	<i>Phaethon lepturus</i>	2	1	1	0	0	3
Black-footed Albatross	<i>Diomedea nigripes</i>	3	0	0	0	0	3

Table 2. (*McArthur* seabirds) continued.

Common Name	Scientific Name	Leg I	Leg II	Leg III	Leg IV	Leg V	Total
Herring Gull	<i>Larus argentatus</i>	0	0	0	1	2	3
Northern Fulmar (light morph)	<i>Fulmarus glacialis</i>	0	0	0	0	3	3
Salvin's Albatross	<i>Diomedea cauta salvini</i>	0	0	1	2	0	3
Westland Petrel	<i>Procellaria westlandica</i>	0	0	0	3	0	3
Wilson's/White-vented Storm-petrel	<i>Oceanites oceanicus/gracilis</i>	0	0	0	3	0	3
Xantus' Murrelet	<i>Synthliboramphus hypoleuca</i>	0	0	0	0	3	3
Band-tailed Gull	<i>Larus belcheri</i>	0	0	0	0	3	3
Buller's Albatross	<i>Diomedea bulleri</i>	0	0	2	0	0	2
Cassin's Auklet	<i>Ptychoramphus aleuticus</i>	0	0	0	0	2	2
Collared/White-winged Petrel	<i>Pterodroma brevipes/eucoptera</i>	2	0	0	0	0	2
Gray Gull	<i>Larus modestus</i>	0	0	0	2	0	2
Herald Petrel	<i>Pterodroma heraldica</i>	2	0	0	0	0	2
Kermadec/Herald Petrel	<i>Pterodroma neglecta/heraldica</i>	2	0	0	0	0	2
Sandwich Tern	<i>Sterna sandvicensis</i>	0	0	0	0	0	0
South Polar Skua	<i>Stercorarius maccormicki</i>	0	0	0	2	0	2
Bermuda Petrel	<i>Pterodroma cahow</i>	0	0	1	1	1	2
Black-browed Albatross	<i>Diomedea melanophris</i>	0	1	0	0	0	1
Chatham Island Albatross	<i>Diomedea cauta eremita</i>	0	0	1	0	0	1
Chilean Skua	<i>Stercorarius chilensis</i>	0	0	1	0	0	1
Least Tern	<i>Sterna antillarum</i>	0	0	1	0	0	1
Northern Fulmar (intermediate morph)	<i>Fulmarus glacialis</i>	0	0	0	1	1	1
Parkinson's Petrel/Shoemaker	<i>Procellaria parkinsonii/aequinoctialis</i>	0	0	1	0	0	1
Southern Giant Petrel	<i>Macronectes giganteus</i>	0	0	1	0	0	1
<b>Totals</b>		<b>10428</b>	<b>8645</b>	<b>3933</b>	<b>18707</b>	<b>4091</b>	<b>45804</b>

Table 3. Captured sea turtles released with satellite tags from the *Jordan* in 2000.

Species	Sex	SCL (cm) <sup>1</sup>	Deployment Date	Last Trans- mission Date	No. of Days Transmitting	Distance Traveled (km)
<i>Caretta caretta</i>	Unknown (Juvenile)	57.0	08/06/00	11/05/00	91	721
<i>Caretta caretta</i>	Unknown (Juvenile)	68.8	08/06/00	10/23/00	78	684
<i>Caretta caretta</i>	Unknown (Juvenile)	55.5	08/08/00	03/27/01	231	2022
<i>Caretta caretta</i>	Unknown (Juvenile)	71.0	12/02/00	04/08/01*	126*	1322*
<i>Caretta caretta</i>	Unknown (Juvenile)	54.5	12/02/00	03/03/01	91	754
<i>Chelonia mydas</i>	Unknown (Juvenile)	58.5	08/06/00	08/28/00	22	489
<i>Chelonia mydas</i>	Male	76.5	12/05/00	12/12/00	7	384
<i>Lepidochelys olivacea</i>	Female	58.5	09/07/00	04/08/01*	213*	3328*

<sup>1</sup>SCL = Straight Carapace Length

\* Still transmitting as of April 8, 2001

Table 4. Identity and numbers of flyingfish sighted from the flying bridge of the *Jordan*, 29 July – 9 December 2000.

Sighting Category	Leg 1	Leg 2	Leg 3	Leg 4	Leg 5	Leg 6	Total
<i>Exocoetus</i> spp.	8877	10283	6603	3184	4362	6384	39693
<i>Cheilopogon</i> spp.	349	317	668	448	420	318	2520
Unidentified flyingfish	350	392	509	446	265	236	2198
Four-winged flyingfish	271	96	270	126	265	632	1660
<i>Hirundichthys</i> spp.	242	273	289	101	75	479	1459
<i>Prognichthys</i> spp.	39	64	2	34	3	0	142
<i>Cypselurus pinnatibarbus</i>	114	0	0	0	0	5	119
<i>Cypselurus callopterus</i>	11	1	0	22	10	5	49
<i>Cypselurus</i> spp.	0	0	0	0	1	13	14
Totals	10253	11426	8341	4361	5401	8072	47854

Table 5. Identity and numbers of flyingfish sighted from the flying bridge of the *McArthur*, 28 July – 9 December 2000.

Sighting Category	Leg 1	Leg 2	Leg 3	Leg 4	Leg 5	Total
<i>Exocoetus</i> spp.	20981	41672	10355	70	12693	85771
Four-winged flyingfish	3827	2430	1215	143	676	8291
<i>Chelopogon</i> spp.	653	1649	1428	41	487	4258
Unidentified flyingfish	207	26	36	49	474	792
<i>Hirundichthys</i> spp.	6	0	0	3	253	262
<i>Cypselurus pinnatibarbus</i>	0	0	0	0	6	6
Totals	25674	45777	13034	306	14589	99380

Table 6. Results of night-light dipnet sampling, *Jordan*, 29 July – 9 December 2000.

Station <sup>1</sup> Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beaufort	Moon <sup>2</sup> Phase	Sky <sup>3</sup>	SST <sup>4</sup> (C)	SSS <sup>5</sup> (psu)	Fish <sup>6</sup> Species	Relative <sup>7</sup> Abund. (Fish)	Number Collected (Fish)	Squid <sup>8</sup> Type	Relative <sup>7</sup> Abund. (Squid)	Number Collected (Squid)
1	00 07 30	1.0	28.83	-115.85	1	5	3	17.7	33.48	30	1	0	1	6	0
1	00 07 30	1.0	28.83	-115.85	1	5	3	17.7	33.48	500	1	1	0	0	0
1	00 07 30	1.0	28.83	-115.85	1	5	3	17.7	33.48	500	5	14	0	0	0
1	00 07 30	1.0	28.83	-115.85	1	5	3	17.7	33.48	500	1	1	0	0	0
1	00 07 30	1.0	28.83	-115.85	1	5	3	17.7	33.48	500	1	0	0	0	0
2	00 07 31	1.0	27.17	-114.77	2	5	2	18.5	33.58	30	4	0	1	6	0
2	00 07 31	1.0	27.17	-114.77	2	5	2	18.5	33.58	500	5	6	0	0	0
2	00 07 31	1.0	27.17	-114.77	2	5	2	18.5	33.58	80	1	0	0	0	0
3	00 08 01	1.0	26.70	-114.10	3	1	2	19.3	33.79	30	1	0	1	4	0
3	00 08 01	1.0	26.70	-114.10	3	1	2	19.3	33.79	500	6	11	0	0	0
3	00 08 01	1.0	26.70	-114.10	3	1	2	19.3	33.79	80	1	0	0	0	0
4	00 08 02	1.0	24.62	-112.52	3	1	1	22.9	33.70	30	3	4	1	2	0
4	00 08 02	1.0	24.62	-112.52	3	1	1	22.9	33.70	80	2	0	3	1	0
4	00 08 02	1.0	24.62	-112.52	3	1	1	22.9	33.70	500	8	4	0	0	0
4	00 08 02	1.0	24.62	-112.52	3	1	1	22.9	33.70	500	8	5	0	0	0
5	00 08 03	1.0	24.00	-115.73	3	1	1	24.0	33.87	100	2	4	1	4	0
5	00 08 03	1.0	24.00	-115.73	3	1	1	24.0	33.87	500	1	2	3	1	0
6	00 08 04	1.0	22.40	-116.95	3	2	1	25.5	33.92	30	1	1	1	3	0
6	00 08 04	1.0	22.40	-116.95	3	2	1	25.5	33.92	10	2	3	2	3	0
6	00 08 04	1.0	22.40	-116.95	3	2	1	25.5	33.92	100	3	7	0	0	0
6	00 08 04	1.0	22.40	-116.95	3	2	1	25.5	33.92	700	3	0	0	0	0
	00 08 05	0.0	22.37	-116.13	-	-	-	-	-	20	0	1	0	0	0
	00 08 05	0.0	22.37	-116.13	-	-	-	-	-	30	0	1	0	0	0
7	00 08 05	1.0	23.02	-114.22	2	2	1	27.4	34.45	20	4	16	1	4	0
7	00 08 05	1.0	23.02	-114.22	2	2	1	27.4	34.45	30	3	4	2	3	0
7	00 08 05	1.0	23.02	-114.22	2	2	1	27.4	34.45	100	2	4	3	2	0
8	00 08 06	1.0	24.00	-111.57	2	2	1	27.4	34.19	10	6	4	3	1	0
8	00 08 06	1.0	24.00	-111.57	2	2	1	27.4	34.19	15	1	2	0	0	0
8	00 08 06	1.0	24.00	-111.57	2	2	1	27.4	34.19	30	2	3	0	0	0
8	00 08 06	1.0	24.00	-111.57	2	2	1	27.4	34.19	100	1	1	0	0	0
8	00 08 06	1.0	24.00	-111.57	2	2	1	27.4	34.19	200	8	8	0	0	0
8	00 08 06	1.0	24.00	-111.57	2	2	1	27.4	34.19	400	1	2	0	0	0
8	00 08 06	1.0	24.00	-111.57	2	2	1	27.4	34.19	500	1	0	0	0	0
8	00 08 06	1.0	24.00	-111.57	2	2	1	27.4	34.19	500	8	2	0	0	0
9	00 08 07	1.0	21.82	-110.13	4	2	1	28.3	34.91	10	3	5	1	4	0
9	00 08 07	1.0	21.82	-110.13	4	2	1	28.3	34.91	20	2	4	2	1	0
9	00 08 07	1.0	21.82	-110.13	4	2	1	28.3	34.91	30	2	2	3	1	0
9	00 08 07	1.0	21.82	-110.13	4	2	1	28.3	34.91	100	3	5	0	0	0
9	00 08 07	1.0	21.82	-110.13	4	2	1	28.3	34.91	400	3	3	0	0	0
10	00 08 08	1.0	22.55	-108.85	3	3	2	29.6	34.89	10	3	5	2	4	0
10	00 08 08	1.0	22.55	-108.85	3	3	2	29.6	34.89	30	3	6	0	0	0
10	00 08 08	1.0	22.55	-108.85	3	3	2	29.6	34.89	100	3	5	0	0	0
10	00 08 08	1.0	22.55	-108.85	3	3	2	29.6	34.89	300	1	0	0	0	0
10	00 08 08	1.0	22.55	-108.85	3	3	2	29.6	34.89	500	1	1	0	0	0
11	00 08 09	1.0	25.10	-109.73	3	3	1	30.8	35.12	10	4	16	2	4	0
11	00 08 09	1.0	25.10	-109.73	3	3	1	30.8	35.12	30	4	22	3	2	0

Table 6. (*Jordan* dipnet sampling) continued.

Station <sup>1</sup> Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beaufort	Moon <sup>2</sup> Phase	Sky <sup>3</sup>	SST <sup>4</sup> (C)	SSS <sup>5</sup> (psu)	Fish <sup>6</sup> Species	Relative Abund. (Fish)	Number Collected (Fish)	Squid <sup>8</sup> Type	Relative Abund. (Squid)	Number Collected (Squid)
11	00 08 09	1.0	25.10	-109.73	3	3	1	30.8	35.12	80	3	7	0	0	0
11	00 08 09	1.0	25.10	-109.73	3	3	1	30.8	35.12	200	8	12	0	0	0
11	00 08 09	1.0	25.10	-109.73	3	3	1	30.8	35.12	400	1	3	0	0	0
11	00 08 09	1.0	25.10	-109.73	3	3	1	30.8	35.12	400	1	1	0	0	0
11	00 08 09	1.0	25.10	-109.73	3	3	1	30.8	35.12	500	1	0	0	0	0
12	00 08 10	1.0	23.43	-107.18	1	3	1	30.6	34.53	30	3	10	3	1	0
12	00 08 10	1.0	23.43	-107.18	1	3	1	30.6	34.53	80	1	0	0	0	0
12	00 08 10	1.0	23.43	-107.18	1	3	1	30.6	34.53	200	8	2	0	0	0
12	00 08 10	1.0	23.43	-107.18	1	3	1	30.6	34.53	400	1	1	0	0	0
12	00 08 10	1.0	23.43	-107.18	1	3	1	30.6	34.53	500	1	1	0	0	0
12	00 08 10	1.0	23.43	-107.18	1	3	1	30.6	34.53	10	1	1	0	0	0
12	00 08 10	1.0	23.43	-107.18	1	3	1	30.6	34.53	500	8	8	0	0	0
12	00 08 10	1.0	23.43	-107.18	1	3	1	30.6	34.53	500	1	1	0	0	0
13	00 08 11	1.0	22.30	-107.45	3	3	1	29.0	34.79	10	1	1	2	4	0
13	00 08 11	1.0	22.30	-107.45	3	3	1	29.0	34.79	30	3	4	0	0	0
13	00 08 11	1.0	22.30	-107.45	3	3	1	29.0	34.79	100	2	1	0	0	0
13	00 08 11	1.0	22.30	-107.45	3	3	1	29.0	34.79	20	1	1	0	0	0
14	00 08 12	1.0	20.72	-105.98	1	4	1	29.4	34.39	30	1	1	3	5	0
14	00 08 12	1.0	20.72	-105.98	1	4	1	29.4	34.39	200	1	1	0	0	0
14	00 08 12	1.0	20.72	-105.98	1	4	1	29.4	34.39	400	1	1	0	0	0
14	00 08 12	1.0	20.72	-105.98	1	4	1	29.4	34.39	500	1	2	0	0	0
14	00 08 12	1.0	20.72	-105.98	1	4	1	29.4	34.39	500	2	1	0	0	0
14	00 08 12	1.0	20.72	-105.98	1	4	1	29.4	34.39	500	1	2	0	0	0
14	00 08 12	1.0	20.72	-105.98	1	4	1	29.4	34.39	500	1	1	0	0	0
14	00 08 12	1.0	20.72	-105.98	1	4	1	29.4	34.39	500	4	28	0	0	0
15	00 08 14	1.0	20.55	-105.43	3	4	2	29.8	34.34	30	1	0	0	0	0
15	00 08 14	1.0	20.55	-105.43	3	4	2	29.8	34.34	80	1	3	0	0	0
15	00 08 14	1.0	20.55	-105.43	3	4	2	29.8	34.34	90	1	0	0	0	0
15	00 08 14	1.0	20.55	-105.43	3	4	2	29.8	34.34	500	1	1	0	0	0
15	00 08 14	1.0	20.55	-105.43	3	4	2	29.8	34.34	500	1	1	0	0	0
16	00 08 14	1.0	20.58	-105.42	3	4	2	29.8	34.28	15	1	1	0	0	0
16	00 08 14	1.0	20.58	-105.42	3	4	2	29.8	34.28	80	3	4	0	0	0
16	00 08 14	1.0	20.58	-105.42	3	4	2	29.8	34.28	90	1	0	0	0	0
17	00 08 15	1.0	19.13	-104.95	1	5	3	28.6	34.23	10	6	52	1	4	0
17	00 08 15	1.0	19.13	-104.95	1	5	3	28.6	34.23	20	5	46	0	0	0
17	00 08 15	1.0	19.13	-104.95	1	5	3	28.6	34.23	30	3	6	0	0	0
17	00 08 15	1.0	19.13	-104.95	1	5	3	28.6	34.23	400	4	12	0	0	0
17	00 08 15	1.0	19.13	-104.95	1	5	3	28.6	34.23	500	1	2	0	0	0
17	00 08 15	1.0	19.13	-104.95	1	5	3	28.6	34.23	500	1	1	0	0	0
17	00 08 15	1.0	19.13	-104.95	1	5	3	28.6	34.23	500	2	4	0	0	0
18	00 08 19	1.0	18.25	-105.25	1	5	1	28.9	34.48	10	2	5	1	4	0
18	00 08 19	1.0	18.25	-105.25	1	5	1	28.9	34.48	30	1	2	2	4	0
18	00 08 19	1.0	18.25	-105.25	1	5	1	28.9	34.48	100	1	1	3	2	0
18	00 08 19	1.0	18.25	-105.25	1	5	1	28.9	34.48	400	3	7	0	0	0
18	00 08 19	1.0	18.25	-105.25	1	5	1	28.9	34.48	200	1	2	0	0	0
19	00 08 20	1.0	16.95	-107.85	2	5	1	29.4	34.23	10	6	18	1	4	0
19	00 08 20	1.0	16.95	-107.85	2	5	1	29.4	34.23	20	3	6	2	4	0

Table 6. (*Jordan* dipnet sampling) continued.

Station <sup>1</sup> Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beaufort	Moon <sup>2</sup> Phase	Sky <sup>3</sup>	SST <sup>4</sup> (C)	SSS <sup>5</sup> (psu)	Fish <sup>6</sup> Species	Relative <sup>7</sup> Abund. (Fish)	Number Collected (Fish)	Squid <sup>8</sup> Type	Relative <sup>7</sup> Abund. (Squid)	Number Collected (Squid)
19	00 08 20	1.0	16.95	-107.85	2	5	1	29.4	34.23	30	2	3	3	2	0
19	00 08 20	1.0	16.95	-107.85	2	5	1	29.4	34.23	100	3	5	0	0	0
19	00 08 20	1.0	16.95	-107.85	2	5	1	29.4	34.23	400	4	10	0	0	0
19	00 08 20	1.0	16.95	-107.85	2	5	1	29.4	34.23	200	1	1	0	0	0
19	00 08 20	1.0	16.95	-107.85	2	5	1	29.4	34.23	500	1	1	0	0	0
20	00 08 21	1.0	16.20	-110.45	2	5	1	28.7	34.35	10	4	9	1	1	0
20	00 08 21	1.0	16.20	-110.45	2	5	1	28.7	34.35	20	3	4	2	5	0
20	00 08 21	1.0	16.20	-110.45	2	5	1	28.7	34.35	30	2	2	3	1	0
20	00 08 21	1.0	16.20	-110.45	2	5	1	28.7	34.35	100	8	11	0	0	0
20	00 08 21	1.0	16.20	-110.45	2	5	1	28.7	34.35	400	1	0	0	0	0
20	00 08 21	1.0	16.20	-110.45	2	5	1	28.7	34.35	500	1	1	0	0	0
21	00 08 22	1.0	15.60	-112.87	3	5	1	28.4	34.37	10	4	11	1	1	0
21	00 08 22	1.0	15.60	-112.87	3	5	1	28.4	34.37	20	2	2	2	4	0
21	00 08 22	1.0	15.60	-112.87	3	5	1	28.4	34.37	100	4	24	3	2	0
21	00 08 22	1.0	15.60	-112.87	3	5	1	28.4	34.37	400	2	2	0	0	0
21	00 08 22	1.0	15.60	-112.87	3	5	1	28.4	34.37	300	1	0	0	0	0
22	00 08 23	1.0	14.63	-115.92	4	5	1	27.8	34.45	10	1	1	1	2	0
22	00 08 23	1.0	14.63	-115.92	4	5	1	27.8	34.45	20	2	3	2	4	0
22	00 08 23	1.0	14.63	-115.92	4	5	1	27.8	34.45	30	1	2	3	2	0
22	00 08 23	1.0	14.63	-115.92	4	5	1	27.8	34.45	100	4	7	0	0	0
22	00 08 23	1.0	14.63	-115.92	4	5	1	27.8	34.45	300	1	0	0	0	0
	00 08 24	0.0	14.60	-116.08	-	-	-	-	-	30	0	3	0	0	0
23	00 08 24	1.0	13.65	-119.30	5	5	3	27.8	33.92	10	1	1	1	3	0
23	00 08 24	1.0	13.65	-119.30	5	5	3	27.8	33.92	20	3	8	2	4	0
23	00 08 24	1.0	13.65	-119.30	5	5	3	27.8	33.92	30	1	0	3	2	0
23	00 08 24	1.0	13.65	-119.30	5	5	3	27.8	33.92	100	4	10	0	0	0
23	00 08 24	1.0	13.65	-119.30	5	5	3	27.8	33.92	400	1	1	0	0	0
24	00 08 25	1.0	12.90	-117.65	5	5	3	28.0	33.63	10	2	4	1	4	0
24	00 08 25	1.0	12.90	-117.65	5	5	3	28.0	33.63	20	2	2	3	1	0
24	00 08 25	1.0	12.90	-117.65	5	5	3	28.0	33.63	30	1	1	0	0	0
24	00 08 25	1.0	12.90	-117.65	5	5	3	28.0	33.63	100	3	6	0	0	0
24	00 08 25	1.0	12.90	-117.65	5	5	3	28.0	33.63	500	1	0	0	0	0
25	00 08 26	1.0	12.25	-114.90	3	5	2	28.4	33.45	10	2	5	1	2	0
25	00 08 26	1.0	12.25	-114.90	3	5	2	28.4	33.45	20	3	8	2	4	0
25	00 08 26	1.0	12.25	-114.90	3	5	2	28.4	33.45	30	2	2	3	1	0
25	00 08 26	1.0	12.25	-114.90	3	5	2	28.4	33.45	100	4	14	0	0	0
25	00 08 26	1.0	12.25	-114.90	3	5	2	28.4	33.45	400	1	1	0	0	0
26	00 08 27	1.0	10.67	-116.68	4	5	2	28.1	33.24	10	4	10	1	3	0
26	00 08 27	1.0	10.67	-116.68	4	5	2	28.1	33.24	20	4	19	2	4	0
26	00 08 27	1.0	10.67	-116.68	4	5	2	28.1	33.24	30	3	7	3	2	0
26	00 08 27	1.0	10.67	-116.68	4	5	2	28.1	33.24	100	4	5	0	0	0
26	00 08 27	1.0	10.67	-116.68	4	5	2	28.1	33.24	500	3	0	0	0	0
27	00 08 28	1.0	9.08	-119.02	5	5	3	27.6	33.41	10	2	2	1	3	0
27	00 08 28	1.0	9.08	-119.02	5	5	3	27.6	33.41	20	4	16	2	4	0
27	00 08 28	1.0	9.08	-119.02	5	5	3	27.6	33.41	30	3	7	3	1	0
27	00 08 28	1.0	9.08	-119.02	5	5	3	27.6	33.41	100	4	15	0	0	0
27	00 08 28	1.0	9.08	-119.02	5	5	3	27.6	33.41	400	1	1	0	0	0

Table 6. (*Jordan* dipnet sampling) continued.

Station <sup>1</sup> Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beaufort	Moon <sup>2</sup> Phase	Sky <sup>3</sup>	SST <sup>4</sup> (C)	SSS <sup>5</sup> (psu)	Fish <sup>6</sup> Species	Relative <sup>7</sup> Abund. (Fish)	Number Collected (Fish)	Squid <sup>8</sup> Type	Relative <sup>7</sup> Abund. (Squid)	Number Collected (Squid)
28	00 08 29	1.0	6.87	-118.82	4	5	3	26.9	34.57	10	4	15	1	4	0
28	00 08 29	1.0	6.87	-118.82	4	5	3	26.9	34.57	20	3	8	2	3	0
28	00 08 29	1.0	6.87	-118.82	4	5	3	26.9	34.57	30	3	7	3	1	0
28	00 08 29	1.0	6.87	-118.82	4	5	3	26.9	34.57	100	5	27	0	0	0
29	00 08 30	1.0	8.22	-115.80	5	5	3	27.4	33.26	0	0	0	1	4	0
29	00 08 30	1.0	8.22	-115.80	5	5	3	27.4	33.26	20	2	3	2	3	0
29	00 08 30	1.0	8.22	-115.80	5	5	3	27.4	33.26	30	2	2	0	0	0
29	00 08 30	1.0	8.22	-115.80	5	5	3	27.4	33.26	100	4	15	0	0	0
30	00 08 31	1.0	9.23	-112.75	5	5	3	27.4	32.40	10	1	0	2	2	0
30	00 08 31	1.0	9.23	-112.75	5	5	3	27.4	32.40	20	2	2	0	0	0
30	00 08 31	1.0	9.23	-112.75	5	5	3	27.4	32.40	30	1	0	0	0	0
30	00 08 31	1.0	9.23	-112.75	5	5	3	27.4	32.40	100	4	9	0	0	0
31	00 09 01	1.0	6.65	-111.02	4	1	2	27.2	32.84	10	2	4	1	3	0
31	00 09 01	1.0	6.65	-111.02	4	1	2	27.2	32.84	20	2	3	2	1	0
31	00 09 01	1.0	6.65	-111.02	4	1	2	27.2	32.84	0	0	0	3	1	0
31	00 09 01	1.0	6.65	-111.02	4	1	2	27.2	32.84	100	4	13	0	0	0
32	00 09 02	1.0	8.75	-108.37	4	2	2	27.6	33.25	10	2	4	1	4	0
32	00 09 02	1.0	8.75	-108.37	4	2	2	27.6	33.25	20	2	4	2	4	0
32	00 09 02	1.0	8.75	-108.37	4	2	2	27.6	33.25	30	3	6	3	2	0
32	00 09 02	1.0	8.75	-108.37	4	2	2	27.6	33.25	100	3	2	0	0	0
32	00 09 02	1.0	8.75	-108.37	4	2	2	27.6	33.25	300	1	0	0	0	0
32	00 09 02	1.0	8.75	-108.37	4	2	2	27.6	33.25	400	1	2	0	0	0
32	00 09 02	1.0	8.75	-108.37	4	2	2	27.6	33.25	500	1	1	0	0	0
32	00 09 02	1.0	8.75	-108.37	4	2	2	27.6	33.25	200	1	1	0	0	0
33	00 09 03	1.0	10.77	-105.72	4	5	3	28.4	33.33	10	2	2	1	3	0
33	00 09 03	1.0	10.77	-105.72	4	5	3	28.4	33.33	20	2	2	2	3	0
33	00 09 03	1.0	10.77	-105.72	4	5	3	28.4	33.33	30	2	3	3	1	0
33	00 09 03	1.0	10.77	-105.72	4	5	3	28.4	33.33	100	3	1	0	0	0
33	00 09 03	1.0	10.77	-105.72	4	5	3	28.4	33.33	300	1	0	0	0	0
33	00 09 03	1.0	10.77	-105.72	4	5	3	28.4	33.33	400	1	2	0	0	0
33	00 09 03	1.0	10.77	-105.72	4	5	3	28.4	33.33	500	1	1	0	0	0
34	00 09 04	1.0	12.62	-103.27	4	5	4	28.8	33.18	10	6	16	1	3	0
34	00 09 04	1.0	12.62	-103.27	4	5	4	28.8	33.18	20	4	15	2	3	0
34	00 09 04	1.0	12.62	-103.27	4	5	4	28.8	33.18	30	2	2	0	0	0
34	00 09 04	1.0	12.62	-103.27	4	5	4	28.8	33.18	100	1	0	0	0	0
34	00 09 04	1.0	12.62	-103.27	4	5	4	28.8	33.18	300	1	0	0	0	0
34	00 09 04	1.0	12.62	-103.27	4	5	4	28.8	33.18	500	1	0	0	0	0
35	00 09 05	1.0	13.13	-100.60	3	2	1	29.7	33.13	10	3	7	2	3	0
35	00 09 05	1.0	13.13	-100.60	3	2	1	29.7	33.13	30	2	2	0	0	0
35	00 09 05	1.0	13.13	-100.60	3	2	1	29.7	33.13	80	1	2	0	0	0
35	00 09 05	1.0	13.13	-100.60	3	2	1	29.7	33.13	500	1	1	0	0	0
35	00 09 05	1.0	13.13	-100.60	3	2	1	29.7	33.13	500	1	2	0	0	0
36	00 09 06	1.0	14.75	-98.63	3	2	2	29.6	33.40	10	4	12	1	2	0
36	00 09 06	1.0	14.75	-98.63	3	2	2	29.6	33.40	20	1	1	2	4	0
36	00 09 06	1.0	14.75	-98.63	3	2	2	29.6	33.40	400	2	3	3	2	0
36	00 09 06	1.0	14.75	-98.63	3	2	2	29.6	33.40	500	2	4	0	0	0
36	00 09 06	1.0	14.75	-98.63	3	2	2	29.6	33.40	500	1	1	0	0	0

Table 6. (*Jordan* dipnet sampling) continued.

Station <sup>1</sup> Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beaufort	Moon <sup>2</sup> Phase	Sky <sup>3</sup>	SST <sup>4</sup> (C)	SSS <sup>5</sup> (psu)	Fish <sup>6</sup> Species	Relative <sup>7</sup> Abund. (Fish)	Number Collected (Fish)	Squid <sup>8</sup> Type	Relative <sup>7</sup> Abund. (Squid)	Number Collected (Squid)
37	00 09 07	1.0	16.47	-99.70	2	5	3	29.6	33.36	10	2	2	1	2	0
37	00 09 07	1.0	16.47	-99.70	2	5	3	29.6	33.36	15	1	1	2	3	0
37	00 09 07	1.0	16.47	-99.70	2	5	3	29.6	33.36	30	1	2	3	2	0
37	00 09 07	1.0	16.47	-99.70	2	5	3	29.6	33.36	200	1	2	0	0	0
37	00 09 07	1.0	16.47	-99.70	2	5	3	29.6	33.36	500	2	3	0	0	0
37	00 09 07	1.0	16.47	-99.70	2	5	3	29.6	33.36	500	3	7	0	0	0
37	00 09 07	1.0	16.47	-99.70	2	5	3	29.6	33.36	500	1	1	0	0	0
37	00 09 07	1.0	16.47	-99.70	2	5	3	29.6	33.36	500	1	1	0	0	0
38	00 09 12	1.0	17.08	-101.18	3	5	4	29.9	33.53	10	1	3	2	3	0
38	00 09 12	1.0	17.08	-101.18	3	5	4	29.9	33.53	30	1	1	3	2	0
38	00 09 12	1.0	17.08	-101.18	3	5	4	29.9	33.53	80	1	1	0	0	0
38	00 09 12	1.0	17.08	-101.18	3	5	4	29.9	33.53	200	2	4	0	0	0
38	00 09 12	1.0	17.08	-101.18	3	5	4	29.9	33.53	400	2	2	0	0	0
38	00 09 12	1.0	17.08	-101.18	3	5	4	29.9	33.53	500	1	1	0	0	0
38	00 09 12	1.0	17.08	-101.18	3	5	4	29.9	33.53	500	1	1	0	0	0
39	00 09 13	1.0	16.00	-103.63	4	3	2	28.7	33.94	10	2	2	1	3	0
39	00 09 13	1.0	16.00	-103.63	4	3	2	28.7	33.94	20	3	9	2	4	0
39	00 09 13	1.0	16.00	-103.63	4	3	2	28.7	33.94	30	4	9	0	0	0
39	00 09 13	1.0	16.00	-103.63	4	3	2	28.7	33.94	100	3	4	0	0	0
40	00 09 14	1.0	14.47	-105.60	3	4	2	28.0	33.61	10	3	6	1	2	0
40	00 09 14	1.0	14.47	-105.60	3	4	2	28.0	33.61	20	2	3	2	4	0
40	00 09 14	1.0	14.47	-105.60	3	4	2	28.0	33.61	30	3	10	0	0	0
40	00 09 14	1.0	14.47	-105.60	3	4	2	28.0	33.61	100	2	1	0	0	0
40	00 09 14	1.0	14.47	-105.60	3	4	2	28.0	33.61	300	1	0	0	0	0
40	00 09 14	1.0	14.47	-105.60	3	4	2	28.0	33.61	400	4	12	0	0	0
41	00 09 15	1.0	12.68	-108.15	3	5	3	27.6	33.19	10	4	12	1	3	0
41	00 09 15	1.0	12.68	-108.15	3	5	3	27.6	33.19	20	4	13	2	3	0
41	00 09 15	1.0	12.68	-108.15	3	5	3	27.6	33.19	30	3	8	0	0	0
41	00 09 15	1.0	12.68	-108.15	3	5	3	27.6	33.19	100	4	4	0	0	0
41	00 09 15	1.0	12.68	-108.15	3	5	3	27.6	33.19	300	1	0	0	0	0
41	00 09 15	1.0	12.68	-108.15	3	5	3	27.6	33.19	400	1	1	0	0	0
42	00 09 17	1.0	8.97	-111.60	5	5	3	27.2	32.86	10	4	9	1	4	0
42	00 09 17	1.0	8.97	-111.60	5	5	3	27.2	32.86	20	4	15	2	3	0
42	00 09 17	1.0	8.97	-111.60	5	5	3	27.2	32.86	30	2	2	1	1	1
42	00 09 17	1.0	8.97	-111.60	5	5	3	27.2	32.86	100	4	12	0	0	0
42	00 09 17	1.0	8.97	-111.60	5	5	3	27.2	32.86	300	1	0	0	0	0
42	00 09 17	1.0	8.97	-111.60	5	5	3	27.2	32.86	500	1	1	0	0	0
43	00 09 18	1.0	6.52	-113.53	3	5	3	27.3	33.60	10	1	1	1	6	0
43	00 09 18	1.0	6.52	-113.53	3	5	3	27.3	33.60	20	2	2	2	5	0
43	00 09 18	1.0	6.52	-113.53	3	5	3	27.3	33.60	30	2	4	0	0	0
43	00 09 18	1.0	6.52	-113.53	3	5	3	27.3	33.60	100	6	76	0	0	0
43	00 09 18	1.0	6.52	-113.53	3	5	3	27.3	33.60	400	1	1	0	0	0
44	00 09 19	1.0	5.28	-110.92	4	5	3	26.8	33.86	10	3	6	1	4	0
44	00 09 19	1.0	5.28	-110.92	4	5	3	26.8	33.86	20	2	4	2	4	0
44	00 09 19	1.0	5.28	-110.92	4	5	3	26.8	33.86	30	3	8	0	0	0
44	00 09 19	1.0	5.28	-110.92	4	5	3	26.8	33.86	100	6	29	0	0	0
44	00 09 19	1.0	5.28	-110.92	4	5	3	26.8	33.86	400	1	0	0	0	0

Table 6. (*Jordan* dipnet sampling) continued.

Station <sup>1</sup> Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beaufort	Moon <sup>2</sup> Phase	Sky <sup>3</sup>	SST <sup>4</sup> (C)	SSS <sup>5</sup> (psu)	Fish <sup>6</sup> Species	Relative <sup>7</sup> Abund. (Fish)	Number Collected (Fish)	Squid <sup>8</sup> Type	Relative <sup>7</sup> Abund. (Squid)	Number Collected (Squid)
45	00 09 20	1.0	5.53	-108.48	4	5	3	26.8	33.68	10	4	8	1	5	0
45	00 09 20	1.0	5.53	-108.48	4	5	3	26.8	33.68	20	3	9	2	3	0
45	00 09 20	1.0	5.53	-108.48	4	5	3	26.8	33.68	30	3	6	3	1	0
45	00 09 20	1.0	5.53	-108.48	4	5	3	26.8	33.68	100	6	26	0	0	0
45	00 09 20	1.0	5.53	-108.48	4	5	3	26.8	33.68	300	1	0	0	0	0
45	00 09 20	1.0	5.53	-108.48	4	5	3	26.8	33.68	400	1	0	0	0	0
46	00 09 21	1.0	6.82	-106.13	3	5	3	27.1	32.80	10	4	16	1	4	0
46	00 09 21	1.0	6.82	-106.13	3	5	3	27.1	32.80	20	4	17	2	3	0
46	00 09 21	1.0	6.82	-106.13	3	5	3	27.1	32.80	30	4	13	3	1	0
46	00 09 21	1.0	6.82	-106.13	3	5	3	27.1	32.80	100	6	18	0	0	0
46	00 09 21	1.0	6.82	-106.13	3	5	3	27.1	32.80	300	1	0	0	0	0
47	00 09 22	1.0	8.57	-104.17	2	5	3	27.2	32.80	10	3	8	1	3	0
47	00 09 22	1.0	8.57	-104.17	2	5	3	27.2	32.80	20	1	2	2	4	0
47	00 09 22	1.0	8.57	-104.17	2	5	3	27.2	32.80	100	5	21	3	2	0
47	00 09 22	1.0	8.57	-104.17	2	5	3	27.2	32.80	300	1	0	0	0	0
47	00 09 22	1.0	8.57	-104.17	2	5	3	27.2	32.80	400	1	1	0	0	0
47	00 09 22	1.0	8.57	-104.17	2	5	3	27.2	32.80	30	1	1	0	0	0
	00 09 23	0.0	8.87	-103.78	-	-	-	-	-	30	0	1	0	0	0
48	00 09 23	1.0	10.27	-102.03	2	5	2	28.2	33.22	10	3	8	1	5	0
48	00 09 23	1.0	10.27	-102.03	2	5	2	28.2	33.22	20	2	2	2	4	0
48	00 09 23	1.0	10.27	-102.03	2	5	2	28.2	33.22	30	2	3	0	0	0
48	00 09 23	1.0	10.27	-102.03	2	5	2	28.2	33.22	100	4	3	0	0	0
48	00 09 23	1.0	10.27	-102.03	2	5	2	28.2	33.22	300	2	0	0	0	0
49	00 09 24	1.0	11.95	-99.35	3	5	2	29.4	32.71	10	4	15	1	3	0
49	00 09 24	1.0	11.95	-99.35	3	5	2	29.4	32.71	20	3	6	2	4	0
49	00 09 24	1.0	11.95	-99.35	3	5	2	29.4	32.71	30	2	4	3	1	0
49	00 09 24	1.0	11.95	-99.35	3	5	2	29.4	32.71	100	4	1	0	0	0
49	00 09 24	1.0	11.95	-99.35	3	5	2	29.4	32.71	500	1	1	0	0	0
50	00 09 25	1.0	12.57	-96.57	3	5	2	28.3	32.72	10	1	1	1	2	0
50	00 09 25	1.0	12.57	-96.57	3	5	2	28.3	32.72	20	1	1	1	2	0
50	00 09 25	1.0	12.57	-96.57	3	5	2	28.3	32.72	30	2	5	3	1	0
50	00 09 25	1.0	12.57	-96.57	3	5	2	28.3	32.72	500	1	1	0	0	0
50	00 09 25	1.0	12.57	-96.57	3	5	2	28.3	32.72	500	1	1	0	0	0
50	00 09 25	1.0	12.57	-96.57	3	5	2	28.3	32.72	200	8	3	0	0	0
51	00 09 26	1.0	13.27	-93.67	3	5	3	29.4	32.06	10	2	1	1	4	0
51	00 09 26	1.0	13.27	-93.67	3	5	3	29.4	32.06	20	1	1	2	4	0
51	00 09 26	1.0	13.27	-93.67	3	5	3	29.4	32.06	30	2	3	3	2	0
51	00 09 26	1.0	13.27	-93.67	3	5	3	29.4	32.06	200	5	19	0	0	0
51	00 09 26	1.0	13.27	-93.67	3	5	3	29.4	32.06	400	2	0	0	0	0
51	00 09 26	1.0	13.27	-93.67	3	5	3	29.4	32.06	500	8	13	0	0	0
51	00 09 26	1.0	13.27	-93.67	3	5	3	29.4	32.06	500	1	1	0	0	0
51	00 09 26	1.0	13.27	-93.67	3	5	3	29.4	32.06	500	1	1	0	0	0
51	00 09 26	1.0	13.27	-93.67	3	5	3	29.4	32.06	500	4	10	0	0	0
52	00 09 27	1.0	13.40	-90.80	4	5	4	29.0	32.20	10	1	2	0	0	0
52	00 09 27	1.0	13.40	-90.80	4	5	4	29.0	32.20	30	3	9	0	0	0
52	00 09 27	1.0	13.40	-90.80	4	5	4	29.0	32.20	80	2	2	0	0	0
52	00 09 27	1.0	13.40	-90.80	4	5	4	29.0	32.20	90	2	2	0	0	0

Table 6. (*Jordan* dipnet sampling) continued.

Station <sup>1</sup> Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beaufort	Moon <sup>2</sup> Phase	Sky <sup>3</sup>	SST <sup>4</sup> (C)	SSS <sup>5</sup> (psu)	Fish <sup>6</sup> Species	Relative <sup>7</sup> Abund. (Fish)	Number Collected (Fish)	Squid <sup>8</sup> Type	Relative <sup>7</sup> Abund. (Squid)	Number Collected (Squid)
52	00 09 27	1.0	13.40	-90.80	4	5	4	29.0	32.20	200	1	1	0	0	0
52	00 09 27	1.0	13.40	-90.80	4	5	4	29.0	32.20	400	1	1	0	0	0
52	00 09 27	1.0	13.40	-90.80	4	5	4	29.0	32.20	500	2	4	0	0	0
52	00 09 27	1.0	13.40	-90.80	4	5	4	29.0	32.20	500	5	12	0	0	0
52	00 09 27	1.0	13.40	-90.80	4	5	4	29.0	32.20	500	3	4	0	0	0
53	00 09 28	1.0	12.65	-87.85	5	5	3	29.3	31.82	30	2	2	0	0	0
53	00 09 28	1.0	12.65	-87.85	5	5	3	29.3	31.82	80	1	2	0	0	0
53	00 09 28	1.0	12.65	-87.85	5	5	3	29.3	31.82	90	1	1	0	0	0
53	00 09 28	1.0	12.65	-87.85	5	5	3	29.3	31.82	500	1	1	0	0	0
53	00 09 28	1.0	12.65	-87.85	5	5	3	29.3	31.82	500	2	0	0	0	0
54	00 09 29	1.0	10.78	-87.30	5	5	3	28.2	32.20	10	5	11	1	4	0
54	00 09 29	1.0	10.78	-87.30	5	5	3	28.2	32.20	20	4	8	2	3	0
54	00 09 29	1.0	10.78	-87.30	5	5	3	28.2	32.20	30	2	1	3	3	0
54	00 09 29	1.0	10.78	-87.30	5	5	3	28.2	32.20	100	2	0	0	0	0
54	00 09 29	1.0	10.78	-87.30	5	5	3	28.2	32.20	400	1	2	0	0	0
54	00 09 29	1.0	10.78	-87.30	5	5	3	28.2	32.20	500	1	0	0	0	0
54	00 09 29	1.0	10.78	-87.30	5	5	3	28.2	32.20	900	1	0	0	0	0
55	00 09 30	1.0	9.40	-84.92	4	5	4	26.0	30.38	15	1	0	1	2	0
55	00 09 30	1.0	9.40	-84.92	4	5	4	26.0	30.38	900	1	0	2	3	0
55	00 09 30	1.0	9.40	-84.92	4	5	4	26.0	30.38	500	1	0	0	0	0
56	00 10 05	1.0	9.20	-84.40	2	2	2	28.7	31.78	15	2	3	1	4	0
56	00 10 05	1.0	9.20	-84.40	2	2	2	28.7	31.78	500	1	1	2	6	0
56	00 10 05	1.0	9.20	-84.40	2	2	2	28.7	31.78	0	0	0	3	3	0
57	00 10 06	1.0	7.75	-82.07	3	2	2	28.8	30.16	30	1	1	3	4	0
57	00 10 06	1.0	7.75	-82.07	3	2	2	28.8	30.16	15	1	1	2	1	0
57	00 10 06	1.0	7.75	-82.07	3	2	2	28.8	30.16	80	1	1	0	0	0
57	00 10 06	1.0	7.75	-82.07	3	2	2	28.8	30.16	90	1	2	0	0	0
57	00 10 06	1.0	7.75	-82.07	3	2	2	28.8	30.16	500	1	2	0	0	0
57	00 10 06	1.0	7.75	-82.07	3	2	2	28.8	30.16	10	1	1	0	0	0
57	00 10 06	1.0	7.75	-82.07	3	2	2	28.8	30.16	900	2	0	0	0	0
58	00 10 07	1.0	7.52	-81.40	0	2	1	27.8	29.81	30	1	1	0	0	0
58	00 10 07	1.0	7.52	-81.40	0	2	1	27.8	29.81	900	1	0	0	0	0
58	00 10 07	1.0	7.52	-81.40	0	2	1	27.8	29.81	500	1	0	0	0	0
59	00 10 07	1.0	6.15	-82.10	3	3	3	27.6	31.92	10	4	10	1	6	0
59	00 10 07	1.0	6.15	-82.10	3	3	3	27.6	31.92	20	2	3	2	3	0
59	00 10 07	1.0	6.15	-82.10	3	3	3	27.6	31.92	30	2	4	3	2	0
59	00 10 07	1.0	6.15	-82.10	3	3	3	27.6	31.92	100	5	16	0	0	0
59	00 10 07	1.0	6.15	-82.10	3	3	3	27.6	31.92	300	1	0	0	0	0
59	00 10 07	1.0	6.15	-82.10	3	3	3	27.6	31.92	400	1	1	0	0	0
60	00 10 08	1.0	6.17	-83.15	4	3	2	27.8	31.46	10	5	15	1	3	0
60	00 10 08	1.0	6.17	-83.15	4	3	2	27.8	31.46	20	3	8	2	2	0
60	00 10 08	1.0	6.17	-83.15	4	3	2	27.8	31.46	30	2	5	3	2	0
61	00 10 08	1.0	6.62	-84.80	3	3	2	27.3	31.81	30	1	0	1	4	0
61	00 10 08	1.0	6.62	-84.80	3	3	2	27.3	31.81	100	4	16	2	2	0
61	00 10 08	1.0	6.62	-84.80	3	3	2	27.3	31.81	300	1	0	0	0	0
61	00 10 08	1.0	6.62	-84.80	3	3	2	27.3	31.81	400	2	0	0	0	0
62	00 10 09	1.0	7.55	-85.53	3	3	1	27.6	31.89	10	1	0	0	0	0

Table 6. (*Jordan* dipnet sampling) continued.

Station <sup>1</sup> Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beaufort	Moon <sup>2</sup> Phase	Sky <sup>3</sup>	SST <sup>4</sup> (C)	SSS <sup>5</sup> (psu)	Fish <sup>6</sup> Species	Relative <sup>7</sup> Abund. (Fish)	Number Collected (Fish)	Squid <sup>8</sup> Type	Relative <sup>7</sup> Abund. (Squid)	Number Collected (Squid)
62	00 10 09	1.0	7.55	-85.53	3	3	1	27.6	31.89	300	1	0	2	2	0
62	00 10 09	1.0	7.55	-85.53	3	3	1	27.6	31.89	20	1	0	3	1	0
63	00 10 09	1.0	9.10	-86.72	2	3	2	28.6	32.91	10	1	0	1	4	0
63	00 10 09	1.0	9.10	-86.72	2	3	2	28.6	32.91	20	2	3	2	5	0
63	00 10 09	1.0	9.10	-86.72	2	3	2	28.6	32.91	80	1	1	3	1	0
63	00 10 09	1.0	9.10	-86.72	2	3	2	28.6	32.91	100	2	1	0	0	0
63	00 10 09	1.0	9.10	-86.72	2	3	2	28.6	32.91	200	1	1	0	0	0
63	00 10 09	1.0	9.10	-86.72	2	3	2	28.6	32.91	500	1	1	0	0	0
63	00 10 09	1.0	9.10	-86.72	2	3	2	28.6	32.91	500	1	0	0	0	0
64	00 10 10	1.0	9.98	-87.38	0	3	2	27.7	32.68	20	4	16	1	2	0
64	00 10 10	1.0	9.98	-87.38	0	3	2	27.7	32.68	30	4	24	2	2	0
64	00 10 10	1.0	9.98	-87.38	0	3	2	27.7	32.68	10	4	13	3	2	0
64	00 10 10	1.0	9.98	-87.38	0	3	2	27.7	32.68	90	1	1	0	0	0
65	00 10 10	1.0	11.60	-88.83	1	4	1	28.2	33.09	10	4	12	2	5	0
65	00 10 10	1.0	11.60	-88.83	1	4	1	28.2	33.09	20	2	3	3	1	0
65	00 10 10	1.0	11.60	-88.83	1	4	1	28.2	33.09	30	2	6	0	0	0
65	00 10 10	1.0	11.60	-88.83	1	4	1	28.2	33.09	500	5	13	0	0	0
66	00 10 11	1.0	10.85	-89.37	0	5	1	27.6	33.26	10	6	38	1	1	0
66	00 10 11	1.0	10.85	-89.37	0	5	1	27.6	33.26	20	5	22	2	1	0
66	00 10 11	1.0	10.85	-89.37	0	5	1	27.6	33.26	30	3	3	0	0	0
66	00 10 11	1.0	10.85	-89.37	0	5	1	27.6	33.26	400	2	1	0	0	0
66	00 10 11	1.0	10.85	-89.37	0	5	1	27.6	33.26	500	3	3	0	0	0
67	00 10 11	1.0	9.50	-90.37	4	4	1	27.7	32.96	10	3	6	1	3	0
67	00 10 11	1.0	9.50	-90.37	4	4	1	27.7	32.96	20	2	4	2	4	0
67	00 10 11	1.0	9.50	-90.37	4	4	1	27.7	32.96	30	2	5	3	1	0
67	00 10 11	1.0	9.50	-90.37	4	4	1	27.7	32.96	400	1	1	0	0	0
68	00 10 12	1.0	8.97	-90.73	3	4	2	27.7	32.97	10	1	1	1	1	0
68	00 10 12	1.0	8.97	-90.73	3	4	2	27.7	32.97	30	2	6	2	2	0
68	00 10 12	1.0	8.97	-90.73	3	4	2	27.7	32.97	0	0	0	3	2	0
69	00 10 12	1.0	10.17	-91.22	4	4	1	28.1	32.83	10	2	3	1	2	0
69	00 10 12	1.0	10.17	-91.22	4	4	1	28.1	32.83	20	2	3	2	5	0
69	00 10 12	1.0	10.17	-91.22	4	4	1	28.1	32.83	30	2	4	3	1	0
69	00 10 12	1.0	10.17	-91.22	4	4	1	28.1	32.83	100	3	0	0	0	0
69	00 10 12	1.0	10.17	-91.22	4	4	1	28.1	32.83	500	2	1	0	0	0
69	00 10 12	1.0	10.17	-91.22	4	4	1	28.1	32.83	200	8	4	0	0	0
69	00 10 12	1.0	10.17	-91.22	4	4	1	28.1	32.83	400	1	0	0	0	0
69	00 10 12	1.0	10.17	-91.22	4	4	1	28.1	32.83	500	1	0	0	0	0
70	00 10 13	1.0	11.17	-91.52	4	4	2	28.8	31.68	20	1	1	1	1	0
70	00 10 13	1.0	11.17	-91.52	4	4	2	28.8	31.68	30	2	3	2	3	0
70	00 10 13	1.0	11.17	-91.52	4	4	2	28.8	31.68	400	2	0	3	1	0
70	00 10 13	1.0	11.17	-91.52	4	4	2	28.8	31.68	90	1	0	0	0	0
70	00 10 13	1.0	11.17	-91.52	4	4	2	28.8	31.68	500	1	1	0	0	0
71	00 10 13	1.0	10.48	-92.45	3	4	1	28.0	33.76	10	5	23	1	2	0
71	00 10 13	1.0	10.48	-92.45	3	4	1	28.0	33.76	20	2	3	2	5	0
71	00 10 13	1.0	10.48	-92.45	3	4	1	28.0	33.76	30	3	6	3	2	0
71	00 10 13	1.0	10.48	-92.45	3	4	1	28.0	33.76	100	2	0	0	0	0
71	00 10 13	1.0	10.48	-92.45	3	4	1	28.0	33.76	500	1	1	0	0	0

Table 6. (*Jordan* dipnet sampling) continued.

Station <sup>1</sup> Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beaufort	Moon <sup>2</sup> Phase	Sky <sup>3</sup>	SST <sup>4</sup> (C)	SSS <sup>5</sup> (psu)	Fish <sup>6</sup> Species	Relative <sup>7</sup> Abund. (Fish)	Number Collected (Fish)	Squid <sup>8</sup> Type	Relative <sup>7</sup> Abund. (Squid)	Number Collected (Squid)
71	00 10 13	1.0	10.48	-92.45	3	4	1	28.0	33.76	200	8	12	0	0	0
71	00 10 13	1.0	10.48	-92.45	3	4	1	28.0	33.76	500	8	4	0	0	0
71	00 10 13	1.0	10.48	-92.45	3	4	1	28.0	33.76	400	1	1	0	0	0
72	00 10 14	1.0	9.70	-93.25	4	4	3	27.9	32.70	10	1	0	0	0	0
72	00 10 14	1.0	9.70	-93.25	4	4	3	27.9	32.70	20	3	4	2	2	0
72	00 10 14	1.0	9.70	-93.25	4	4	3	27.9	32.70	30	2	3	0	0	0
73	00 10 14	1.0	8.73	-94.38	1	5	2	28.1	32.89	10	6	17	1	4	0
73	00 10 14	1.0	8.73	-94.38	1	5	2	28.1	32.89	20	4	12	2	6	0
73	00 10 14	1.0	8.73	-94.38	1	5	2	28.1	32.89	30	2	4	3	2	0
73	00 10 14	1.0	8.73	-94.38	1	5	2	28.1	32.89	100	3	4	0	0	0
74	00 10 15	1.0	8.75	-95.43	0	4	2	27.6	33.02	10	2	3	1	4	0
74	00 10 15	1.0	8.75	-95.43	0	4	2	27.6	33.02	20	1	2	2	5	0
74	00 10 15	1.0	8.75	-95.43	0	4	2	27.6	33.02	30	2	3	3	3	0
75	00 10 15	1.0	8.65	-97.23	3	5	3	-	-	10	5	14	1	5	0
75	00 10 15	1.0	8.65	-97.23	3	5	3	-	-	20	2	3	2	4	0
75	00 10 15	1.0	8.65	-97.23	3	5	3	-	-	30	2	5	3	2	0
75	00 10 15	1.0	8.65	-97.23	3	5	3	-	-	100	3	3	0	0	0
75	00 10 15	1.0	8.65	-97.23	3	5	3	-	-	500	1	1	0	0	0
76	00 10 16	1.0	8.72	-98.55	4	5	2	27.8	32.70	100	4	13	1	2	0
76	00 10 16	1.0	8.72	-98.55	4	5	2	27.8	32.70	10	2	3	2	4	0
76	00 10 16	1.0	8.72	-98.55	4	5	2	27.8	32.70	20	2	1	3	1	0
76	00 10 16	1.0	8.72	-98.55	4	5	2	27.8	32.70	30	3	7	0	0	0
77	00 10 16	1.0	8.80	-100.45	4	5	3	27.7	32.89	10	6	31	1	6	0
77	00 10 16	1.0	8.80	-100.45	4	5	3	27.7	32.89	20	5	33	2	4	0
77	00 10 16	1.0	8.80	-100.45	4	5	3	27.7	32.89	30	4	9	3	2	0
77	00 10 16	1.0	8.80	-100.45	4	5	3	27.7	32.89	100	8	5	0	0	0
77	00 10 16	1.0	8.80	-100.45	4	5	3	27.7	32.89	400	2	1	0	0	0
78	00 10 17	1.0	9.83	-100.37	4	3	2	27.6	33.09	10	1	1	1	1	0
78	00 10 17	1.0	9.83	-100.37	4	3	2	27.6	33.09	20	1	1	2	2	0
78	00 10 17	1.0	9.83	-100.37	4	3	2	27.6	33.09	30	1	1	3	1	0
78	00 10 17	1.0	9.83	-100.37	4	3	2	27.6	33.09	100	1	1	0	0	0
79	00 10 17	1.0	10.73	-98.93	5	5	2	27.7	33.04	10	6	16	1	4	0
79	00 10 17	1.0	10.73	-98.93	5	5	2	27.7	33.04	20	4	27	2	4	0
79	00 10 17	1.0	10.73	-98.93	5	5	2	27.7	33.04	30	4	16	0	0	0
79	00 10 17	1.0	10.73	-98.93	5	5	2	27.7	33.04	100	8	1	0	0	0
80	00 10 18	1.0	11.20	-98.02	5	3	2	27.7	32.97	10	2	1	0	0	0
80	00 10 18	1.0	11.20	-98.02	5	3	2	27.7	32.97	20	3	1	2	1	0
80	00 10 18	1.0	11.20	-98.02	5	3	2	27.7	32.97	30	3	1	0	0	0
81	00 10 18	1.0	11.82	-96.65	5	5	2	27.3	32.57	10	5	24	1	3	0
81	00 10 18	1.0	11.82	-96.65	5	5	2	27.3	32.57	20	2	2	2	4	0
81	00 10 18	1.0	11.82	-96.65	5	5	2	27.3	32.57	30	3	9	3	1	0
81	00 10 18	1.0	11.82	-96.65	5	5	2	27.3	32.57	80	1	2	0	0	0
81	00 10 18	1.0	11.82	-96.65	5	5	2	27.3	32.57	100	9	0	0	0	0
81	00 10 18	1.0	11.82	-96.65	5	5	2	27.3	32.57	200	4	8	0	0	0
81	00 10 18	1.0	11.82	-96.65	5	5	2	27.3	32.57	500	1	1	0	0	0
82	00 10 19	1.0	12.85	-96.93	5	2	2	26.5	33.14	30	2	2	1	1	0
82	00 10 19	1.0	12.85	-96.93	5	2	2	26.5	33.14	500	1	1	2	2	0

Table 6. (*Jordan* dipnet sampling) continued.

Station <sup>1</sup> Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beaufort	Moon <sup>2</sup> Phase	Sky <sup>3</sup>	SST <sup>4</sup> (C)	SSS <sup>5</sup> (psu)	Fish <sup>6</sup> Species	Relative <sup>7</sup> Abund. (Fish)	Number Collected (Fish)	Squid <sup>8</sup> Type	Relative <sup>7</sup> Abund. (Squid)	Number Collected (Squid)
82	00 10 19	1.0	12.85	-96.93	5	2	2	26.5	33.14	0	0	0	3	1	0
	00 10 19	0.0	12.85	-96.93	-	-	-	-	-	20	0	1	0	0	0
83	00 10 19	1.0	14.73	-97.60	1	5	2	29.6	32.85	10	6	16	1	3	0
83	00 10 19	1.0	14.73	-97.60	1	5	2	29.6	32.85	20	4	25	2	3	0
83	00 10 19	1.0	14.73	-97.60	1	5	2	29.6	32.85	30	4	13	3	2	0
83	00 10 19	1.0	14.73	-97.60	1	5	2	29.6	32.85	80	2	2	0	0	0
83	00 10 19	1.0	14.73	-97.60	1	5	2	29.6	32.85	200	8	14	0	0	0
83	00 10 19	1.0	14.73	-97.60	1	5	2	29.6	32.85	400	1	1	0	0	0
83	00 10 19	1.0	14.73	-97.60	1	5	2	29.6	32.85	500	8	3	0	0	0
83	00 10 19	1.0	14.73	-97.60	1	5	2	29.6	32.85	500	8	1	0	0	0
83	00 10 19	1.0	14.73	-97.60	1	5	2	29.6	32.85	500	8	2	0	0	0
83	00 10 19	1.0	14.73	-97.60	1	5	2	29.6	32.85	500	8	24	0	0	0
83	00 10 19	1.0	14.73	-97.60	1	5	2	29.6	32.85	500	8	8	0	0	0
83	00 10 19	1.0	14.73	-97.60	1	5	2	29.6	32.85	500	8	4	0	0	0
84	00 10 20	1.0	15.82	-97.88	0	2	1	29.6	32.53	30	3	10	1	1	0
84	00 10 20	1.0	15.82	-97.88	0	2	1	29.6	32.53	500	5	5	2	2	0
84	00 10 20	1.0	15.82	-97.88	0	2	1	29.6	32.53	0	0	0	3	2	0
85	00 10 20	1.0	15.52	-96.53	2	5	2	30.6	32.66	10	5	10	2	3	0
85	00 10 20	1.0	15.52	-96.53	2	5	2	30.6	32.66	20	1	2	0	0	0
85	00 10 20	1.0	15.52	-96.53	2	5	2	30.6	32.66	30	2	3	0	0	0
85	00 10 20	1.0	15.52	-96.53	2	5	2	30.6	32.66	80	1	0	0	0	0
85	00 10 20	1.0	15.52	-96.53	2	5	2	30.6	32.66	200	1	1	0	0	0
85	00 10 20	1.0	15.52	-96.53	2	5	2	30.6	32.66	500	4	26	0	0	0
85	00 10 20	1.0	15.52	-96.53	2	5	2	30.6	32.66	500	8	6	0	0	0
85	00 10 20	1.0	15.52	-96.53	2	5	2	30.6	32.66	500	2	2	0	0	0
85	00 10 20	1.0	15.52	-96.53	2	5	2	30.6	32.66	500	2	3	0	0	0
85	00 10 20	1.0	15.52	-96.53	2	5	2	30.6	32.66	500	6	8	0	0	0
85	00 10 20	1.0	15.52	-96.53	2	5	2	30.6	32.66	500	1	1	0	0	0
85	00 10 20	1.0	15.52	-96.53	2	5	2	30.6	32.66	500	8	2	0	0	0
86	00 10 21	1.0	15.72	-95.33	4	2	1	23.0	33.47	500	1	1	0	0	0
87	00 10 21	1.0	15.07	-93.67	1	5	1	29.1	32.80	10	5	18	3	4	0
87	00 10 21	1.0	15.07	-93.67	1	5	1	29.1	32.80	20	2	3	0	0	0
87	00 10 21	1.0	15.07	-93.67	1	5	1	29.1	32.80	30	4	16	0	0	0
87	00 10 21	1.0	15.07	-93.67	1	5	1	29.1	32.80	80	1	1	0	0	0
87	00 10 21	1.0	15.07	-93.67	1	5	1	29.1	32.80	200	8	29	0	0	0
87	00 10 21	1.0	15.07	-93.67	1	5	1	29.1	32.80	500	4	7	0	0	0
87	00 10 21	1.0	15.07	-93.67	1	5	1	29.1	32.80	500	1	1	0	0	0
87	00 10 21	1.0	15.07	-93.67	1	5	1	29.1	32.80	500	4	6	0	0	0
87	00 10 21	1.0	15.07	-93.67	1	5	1	29.1	32.80	500	6	25	0	0	0
87	00 10 21	1.0	15.07	-93.67	1	5	1	29.1	32.80	500	4	1	0	0	0
88	00 10 22	0.3	14.58	-92.70	0	1	1	31.0	31.85	500	4	3	0	0	0
89	00 10 22	1.0	13.62	-91.78	2	5	2	30.4	31.69	30	4	32	1	2	0
89	00 10 22	1.0	13.62	-91.78	2	5	2	30.4	31.69	80	6	42	2	4	0
89	00 10 22	1.0	13.62	-91.78	2	5	2	30.4	31.69	90	1	1	3	3	0
89	00 10 22	1.0	13.62	-91.78	2	5	2	30.4	31.69	200	8	5	0	0	0
89	00 10 22	1.0	13.62	-91.78	2	5	2	30.4	31.69	400	1	1	0	0	0
89	00 10 22	1.0	13.62	-91.78	2	5	2	30.4	31.69	400	1	2	0	0	0

Table 6. (*Jordan* dipnet sampling) continued.

Station <sup>1</sup> Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beaufort	Moon <sup>2</sup> Phase	Sky <sup>3</sup>	SST <sup>4</sup> (C)	SSS <sup>5</sup> (psu)	Fish <sup>6</sup> Species	Relative <sup>7</sup> Abund. (Fish)	Number Collected (Fish)	Squid <sup>8</sup> Type	Relative <sup>7</sup> Abund. (Squid)	Number Collected (Squid)
89	00 10 22	1.0	13.62	-91.78	2	5	2	30.4	31.69	500	1	2	0	0	0
89	00 10 22	1.0	13.62	-91.78	2	5	2	30.4	31.69	500	6	19	0	0	0
89	00 10 22	1.0	13.62	-91.78	2	5	2	30.4	31.69	500	1	1	0	0	0
89	00 10 22	1.0	13.62	-91.78	2	5	2	30.4	31.69	500	2	5	0	0	0
90	00 10 29	1.0	13.68	-91.20	2	1	2	29.2	32.69	10	1	0	0	0	0
90	00 10 29	1.0	13.68	-91.20	2	1	2	29.2	32.69	30	1	3	0	0	0
90	00 10 29	1.0	13.68	-91.20	2	1	2	29.2	32.69	500	1	1	0	0	0
90	00 10 29	1.0	13.68	-91.20	2	1	2	29.2	32.69	80	1	1	0	0	0
90	00 10 29	1.0	13.68	-91.20	2	1	2	29.2	32.69	500	3	6	0	0	0
90	00 10 29	1.0	13.68	-91.20	2	1	2	29.2	32.69	500	3	1	0	0	0
90	00 10 29	1.0	13.68	-91.20	2	1	2	29.2	32.69	500	1	0	0	0	0
90	00 10 29	1.0	13.68	-91.20	2	1	2	29.2	32.69	500	1	1	0	0	0
91	00 10 30	1.0	12.78	-92.20	2	5	1	29.8	32.56	10	2	1	1	1	0
91	00 10 30	1.0	12.78	-92.20	2	5	1	29.8	32.56	80	4	7	2	1	0
91	00 10 30	1.0	12.78	-92.20	2	5	1	29.8	32.56	90	1	1	3	1	0
91	00 10 30	1.0	12.78	-92.20	2	5	1	29.8	32.56	30	4	13	0	0	0
91	00 10 30	1.0	12.78	-92.20	2	5	1	29.8	32.56	500	4	1	0	0	0
91	00 10 30	1.0	12.78	-92.20	2	5	1	29.8	32.56	500	5	3	0	0	0
91	00 10 30	1.0	12.78	-92.20	2	5	1	29.8	32.56	500	6	14	0	0	0
92	00 10 30	1.0	11.48	-93.55	3	5	1	28.8	33.18	10	3	5	2	5	0
92	00 10 30	1.0	11.48	-93.55	3	5	1	28.8	33.18	20	4	10	3	4	0
92	00 10 30	1.0	11.48	-93.55	3	5	1	28.8	33.18	30	2	4	0	0	0
92	00 10 30	1.0	11.48	-93.55	3	5	1	28.8	33.18	125	1	1	0	0	0
92	00 10 30	1.0	11.48	-93.55	3	5	1	28.8	33.18	200	5	35	0	0	0
92	00 10 30	1.0	11.48	-93.55	3	5	1	28.8	33.18	400	1	2	0	0	0
92	00 10 30	1.0	11.48	-93.55	3	5	1	28.8	33.18	500	1	1	0	0	0
92	00 10 30	1.0	11.48	-93.55	3	5	1	28.8	33.18	500	1	1	0	0	0
92	00 10 30	1.0	11.48	-93.55	3	5	1	28.8	33.18	500	1	1	0	0	0
93	00 10 31	1.0	10.67	-94.42	2	5	1	28.1	33.12	10	3	6	1	2	0
93	00 10 31	1.0	10.67	-94.42	2	5	1	28.1	33.12	20	3	10	2	2	0
93	00 10 31	1.0	10.67	-94.42	2	5	1	28.1	33.12	30	3	12	3	1	0
93	00 10 31	1.0	10.67	-94.42	2	5	1	28.1	33.12	500	2	1	0	0	0
93	00 10 31	1.0	10.67	-94.42	2	5	1	28.1	33.12	90	1	0	0	0	0
94	00 10 31	1.0	9.78	-95.72	3	5	3	27.4	33.18	10	5	24	1	4	0
94	00 10 31	1.0	9.78	-95.72	3	5	3	27.4	33.18	20	5	37	2	4	0
94	00 10 31	1.0	9.78	-95.72	3	5	3	27.4	33.18	30	4	11	0	0	0
94	00 10 31	1.0	9.78	-95.72	3	5	3	27.4	33.18	100	1	1	0	0	0
94	00 10 31	1.0	9.78	-95.72	3	5	3	27.4	33.18	200	1	1	0	0	0
95	00 11 01	1.0	9.00	-96.50	1	5	1	26.4	33.35	10	2	4	1	1	0
95	00 11 01	1.0	9.00	-96.50	1	5	1	26.4	33.35	20	1	0	2	1	0
95	00 11 01	1.0	9.00	-96.50	1	5	1	26.4	33.35	500	1	1	0	0	0
00	11 01	0.0	9.00	-96.50	-	-	-	-	-	30	0	1	0	0	0
96	00 11 01	1.0	7.97	-97.57	3	1	2	28.0	32.97	10	5	18	1	3	0
96	00 11 01	1.0	7.97	-97.57	3	1	2	28.0	32.97	20	2	2	2	5	0
96	00 11 01	1.0	7.97	-97.57	3	1	2	28.0	32.97	30	3	5	0	0	0
96	00 11 01	1.0	7.97	-97.57	3	1	2	28.0	32.97	100	2	3	0	0	0
96	00 11 01	1.0	7.97	-97.57	3	1	2	28.0	32.97	400	1	1	0	0	0

Table 6. (*Jordan* dipnet sampling) continued.

Station <sup>1</sup> Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beaufort	Moon <sup>2</sup> Phase	Sky <sup>3</sup>	SST <sup>4</sup> (C)	SSS <sup>5</sup> (psu)	Fish <sup>6</sup> Species	Relative <sup>7</sup> Abund. (Fish)	Number Collected (Fish)	Squid <sup>8</sup> Type	Relative <sup>7</sup> Abund. (Squid)	Number Collected (Squid)
97	00 11 02	1.0	7.25	-98.35	3	1	3	28.0	32.42	10	1	1	3	3	0
97	00 11 02	1.0	7.25	-98.35	3	1	3	28.0	32.42	30	2	1	0	0	0
97	00 11 02	1.0	7.25	-98.35	3	1	3	28.0	32.42	20	3	1	0	0	0
97	00 11 02	1.0	7.25	-98.35	3	1	3	28.0	32.42	100	2	1	0	0	0
98	00 11 02	1.0	6.48	-99.70	3	5	3	27.4	32.82	10	4	4	1	3	0
98	00 11 02	1.0	6.48	-99.70	3	5	3	27.4	32.82	20	1	0	2	2	0
98	00 11 02	1.0	6.48	-99.70	3	5	3	27.4	32.82	100	4	11	3	3	0
98	00 11 02	1.0	6.48	-99.70	3	5	3	27.4	32.82	300	1	0	0	0	0
98	00 11 02	1.0	6.48	-99.70	3	5	3	27.4	32.82	400	2	0	0	0	0
98	00 11 02	1.0	6.48	-99.70	3	5	3	27.4	32.82	500	1	1	0	0	0
99	00 11 03	1.0	6.40	-100.75	3	5	3	27.3	32.93	10	3	5	1	1	0
99	00 11 03	1.0	6.40	-100.75	3	5	3	27.3	32.93	20	1	2	2	1	0
99	00 11 03	1.0	6.40	-100.75	3	5	3	27.3	32.93	30	1	1	3	1	0
100	00 11 03	1.0	6.35	-102.42	4	5	3	27.3	32.63	20	3	6	0	0	0
100	00 11 03	1.0	6.35	-102.42	4	5	3	27.3	32.63	30	2	3	0	0	0
100	00 11 03	1.0	6.35	-102.42	4	5	3	27.3	32.63	100	5	24	0	0	0
100	00 11 03	1.0	6.35	-102.42	4	5	3	27.3	32.63	500	1	0	0	0	0
101	00 11 04	1.0	6.35	-103.50	0	5	2	27.1	32.65	10	1	1	1	2	0
101	00 11 04	1.0	6.35	-103.50	0	5	2	27.1	32.65	20	2	4	2	2	0
101	00 11 04	1.0	6.35	-103.50	0	5	2	27.1	32.65	30	1	0	3	1	0
101	00 11 04	1.0	6.35	-103.50	0	5	2	27.1	32.65	100	3	7	0	0	0
102	00 11 04	1.0	6.40	-105.33	4	2	3	27.2	32.61	10	1	2	1	3	0
102	00 11 04	1.0	6.40	-105.33	4	2	3	27.2	32.61	20	1	1	2	4	0
102	00 11 04	1.0	6.40	-105.33	4	2	3	27.2	32.61	30	2	4	0	0	0
102	00 11 04	1.0	6.40	-105.33	4	2	3	27.2	32.61	100	6	67	0	0	0
102	00 11 04	1.0	6.40	-105.33	4	2	3	27.2	32.61	400	1	1	0	0	0
103	00 11 05	1.0	6.30	-106.37	1	5	4	27.2	32.53	10	2	3	1	1	0
103	00 11 05	1.0	6.30	-106.37	1	5	4	27.2	32.53	20	1	1	2	1	0
103	00 11 05	1.0	6.30	-106.37	1	5	4	27.2	32.53	30	1	0	0	0	0
103	00 11 05	1.0	6.30	-106.37	1	5	4	27.2	32.53	500	1	1	0	0	0
104	00 11 05	1.0	6.27	-108.37	3	5	4	27.0	32.21	10	3	3	1	8	0
104	00 11 05	1.0	6.27	-108.37	3	5	4	27.0	32.21	20	1	2	2	8	0
104	00 11 05	1.0	6.27	-108.37	3	5	4	27.0	32.21	30	1	1	0	0	0
104	00 11 05	1.0	6.27	-108.37	3	5	4	27.0	32.21	100	8	5	0	0	0
104	00 11 05	1.0	6.27	-108.37	3	5	4	27.0	32.21	500	1	1	0	0	0
104	00 11 05	1.0	6.27	-108.37	3	5	4	27.0	32.21	400	1	1	0	0	0
105	00 11 06	1.0	6.23	-111.35	4	3	2	27.0	33.03	20	3	6	1	2	0
105	00 11 06	1.0	6.23	-111.35	4	3	2	27.0	33.03	30	2	2	2	4	0
105	00 11 06	1.0	6.23	-111.35	4	3	2	27.0	33.03	100	5	25	3	1	0
105	00 11 06	1.0	6.23	-111.35	4	3	2	27.0	33.03	300	1	0	0	0	0
106	00 11 07	1.0	6.23	-112.53	4	5	3	27.2	33.50	10	2	4	1	1	0
106	00 11 07	1.0	6.23	-112.53	4	5	3	27.2	33.50	20	1	2	2	2	0
106	00 11 07	1.0	6.23	-112.53	4	5	3	27.2	33.50	100	1	1	3	2	0
107	00 11 07	1.0	6.22	-114.52	4	3	2	27.1	33.77	20	1	2	1	2	0
107	00 11 07	1.0	6.22	-114.52	4	3	2	27.1	33.77	30	2	1	2	3	0
107	00 11 07	1.0	6.22	-114.52	4	3	2	27.1	33.77	100	5	17	0	0	0
107	00 11 07	1.0	6.22	-114.52	4	3	2	27.1	33.77	400	1	0	0	0	0

Table 6. (*Jordan* dipnet sampling) continued.

Station <sup>1</sup> Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beaufort	Moon <sup>2</sup> Phase	Sky <sup>3</sup>	SST <sup>4</sup> (C)	SSS <sup>5</sup> (psu)	Fish <sup>6</sup> Species	Relative <sup>7</sup> Abund. (Fish)	Number Collected (Fish)	Squid <sup>8</sup> Type	Relative <sup>7</sup> Abund. (Squid)	Number Collected (Squid)
108	00 11 08	1.0	7.10	-114.43	5	3	2	27.5	33.53	20	1	0	0	0	0
108	00 11 08	1.0	7.10	-114.43	5	3	2	27.5	33.53	30	2	0	0	0	0
109	00 11 08	1.0	8.25	-112.72	5	3	2	27.5	32.67	20	1	0	1	2	0
109	00 11 08	1.0	8.25	-112.72	5	3	2	27.5	32.67	100	4	6	2	1	0
110	00 11 09	1.0	8.53	-112.08	5	3	3	27.4	32.68	20	2	1	1	1	0
110	00 11 09	1.0	8.53	-112.08	5	3	3	27.4	32.68	30	2	0	2	2	0
110	00 11 09	1.0	8.53	-112.08	5	3	3	27.4	32.68	500	1	1	0	0	0
110	00 11 09	1.0	8.53	-112.08	5	3	3	27.4	32.68	300	1	0	0	0	0
110	00 11 09	1.0	8.53	-112.08	5	3	3	27.4	32.68	300	1	0	0	0	0
111	00 11 09	1.0	9.52	-110.45	4	3	2	27.4	32.60	10	1	1	1	2	0
111	00 11 09	1.0	9.52	-110.45	4	3	2	27.4	32.60	20	1	0	2	3	0
111	00 11 09	1.0	9.52	-110.45	4	3	2	27.4	32.60	100	3	7	0	0	0
111	00 11 09	1.0	9.52	-110.45	4	3	2	27.4	32.60	400	2	3	0	0	0
112	00 11 10	1.0	10.00	-109.67	5	3	2	27.5	33.07	10	2	5	1	1	0
112	00 11 10	1.0	10.00	-109.67	5	3	2	27.5	33.07	20	1	0	2	2	0
112	00 11 10	1.0	10.00	-109.67	5	3	2	27.5	33.07	300	1	0	0	0	0
112	00 11 10	1.0	10.00	-109.67	5	3	2	27.5	33.07	100	2	1	0	0	0
113	00 11 10	1.0	10.32	-109.20	3	4	2	27.7	32.98	30	2	1	0	0	0
113	00 11 10	1.0	10.32	-109.20	3	4	2	27.7	32.98	80	3	3	0	0	0
113	00 11 10	1.0	10.32	-109.20	3	4	2	27.7	32.98	500	1	1	0	0	0
113	00 11 10	1.0	10.32	-109.20	3	4	2	27.7	32.98	500	1	1	0	0	0
113	00 11 10	1.0	10.32	-109.20	3	4	2	27.7	32.98	200	1	1	0	0	0
113	00 11 10	1.0	10.32	-109.20	3	4	2	27.7	32.98	500	1	1	0	0	0
114	00 11 11	1.0	11.03	-108.23	4	4	2	28.1	33.18	10	1	0	0	0	0
114	00 11 11	1.0	11.03	-108.23	4	4	2	28.1	33.18	20	2	0	2	2	0
114	00 11 11	1.0	11.03	-108.23	4	4	2	28.1	33.18	0	0	0	3	1	0
114	00 11 11	1.0	11.03	-108.23	4	4	2	28.1	33.18	500	1	1	0	0	0
115	00 11 11	1.0	12.37	-106.52	3	4	2	28.6	33.11	10	2	4	1	2	0
115	00 11 11	1.0	12.37	-106.52	3	4	2	28.6	33.11	20	2	5	2	3	0
115	00 11 11	1.0	12.37	-106.52	3	4	2	28.6	33.11	30	2	2	0	0	0
115	00 11 11	1.0	12.37	-106.52	3	4	2	28.6	33.11	100	3	1	0	0	0
116	00 11 12	1.0	13.12	-105.53	3	4	3	28.8	32.99	0	0	0	1	1	0
116	00 11 12	1.0	13.12	-105.53	3	4	3	28.8	32.99	20	1	0	2	3	0
116	00 11 12	1.0	13.12	-105.53	3	4	3	28.8	32.99	30	2	3	3	1	0
117	00 11 12	1.0	14.15	-104.18	3	4	2	29.5	32.88	10	5	15	1	3	0
117	00 11 12	1.0	14.15	-104.18	3	4	2	29.5	32.88	20	2	2	2	4	0
117	00 11 12	1.0	14.15	-104.18	3	4	2	29.5	32.88	30	3	5	0	0	0
117	00 11 12	1.0	14.15	-104.18	3	4	2	29.5	32.88	100	4	5	0	0	0
118	00 11 13	1.0	14.73	-103.40	1	4	3	29.0	32.81	10	1	0	1	1	0
118	00 11 13	1.0	14.73	-103.40	1	4	3	29.0	32.81	20	3	6	2	4	0
118	00 11 13	1.0	14.73	-103.40	1	4	3	29.0	32.81	30	1	1	3	1	0
119	00 11 13	1.0	15.82	-101.92	2	5	2	30.2	33.55	10	6	14	1	3	0
119	00 11 13	1.0	15.82	-101.92	2	5	2	30.2	33.55	20	2	1	2	3	0
119	00 11 13	1.0	15.82	-101.92	2	5	2	30.2	33.55	30	2	2	3	3	0
119	00 11 13	1.0	15.82	-101.92	2	5	2	30.2	33.55	100	3	1	0	0	0
119	00 11 13	1.0	15.82	-101.92	2	5	2	30.2	33.55	400	2	2	0	0	0

Table 6. (*Jordan* dipnet sampling) continued.

Station <sup>1</sup> Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beaufort	Moon <sup>2</sup> Phase	Sky <sup>3</sup>	SST <sup>4</sup> (C)	SSS <sup>5</sup> (psu)	Fish <sup>6</sup> Species	Relative <sup>7</sup> Abund. (Fish)	Number Collected (Fish)	Squid <sup>8</sup> Type	Relative <sup>7</sup> Abund. (Squid)	Number Collected (Squid)
119	00 11 13	1.0	15.82	-101.92	2	5	2	30.2	33.55	500	2	1	0	0	0
119	00 11 13	1.0	15.82	-101.92	2	5	2	30.2	33.55	500	2	1	0	0	0
120	00 11 14	1.0	16.35	-100.60	0	3	2	29.5	33.43	0	0	0	1	2	0
120	00 11 14	1.0	16.35	-100.60	0	3	2	29.5	33.43	0	0	0	2	3	0
120	00 11 14	1.0	16.35	-100.60	0	3	2	29.5	33.43	30	1	1	3	1	0
120	00 11 14	1.0	16.35	-100.60	0	3	2	29.5	33.43	500	3	4	0	0	0
121	00 11 14	1.0	17.37	-101.72	3	5	2	29.3	33.37	30	1	1	1	3	0
121	00 11 14	1.0	17.37	-101.72	3	5	2	29.3	33.37	500	5	15	3	3	0
121	00 11 14	1.0	17.37	-101.72	3	5	2	29.3	33.37	500	1	2	0	0	0
121	00 11 14	1.0	17.37	-101.72	3	5	2	29.3	33.37	500	8	5	0	0	0
121	00 11 14	1.0	17.37	-101.72	3	5	2	29.3	33.37	500	2	1	0	0	0
122	00 11 15	1.0	17.67	-102.18	0	3	2	29.1	33.04	30	2	6	3	2	0
122	00 11 15	1.0	17.67	-102.18	0	3	2	29.1	33.04	500	2	2	0	0	0
122	00 11 15	1.0	17.67	-102.18	0	3	2	29.1	33.04	500	4	4	0	0	0
122	00 11 15	1.0	17.67	-102.18	0	3	2	29.1	33.04	500	4	1	0	0	0
123	00 11 15	1.0	18.17	-103.80	3	5	2	27.9	33.80	10	3	6	1	4	0
123	00 11 15	1.0	18.17	-103.80	3	5	2	27.9	33.80	15	4	20	2	3	0
123	00 11 15	1.0	18.17	-103.80	3	5	2	27.9	33.80	30	3	7	0	0	0
123	00 11 15	1.0	18.17	-103.80	3	5	2	27.9	33.80	80	4	15	0	0	0
123	00 11 15	1.0	18.17	-103.80	3	5	2	27.9	33.80	500	1	1	0	0	0
123	00 11 15	1.0	18.17	-103.80	3	5	2	27.9	33.80	500	1	1	0	0	0
123	00 11 15	1.0	18.17	-103.80	3	5	2	27.9	33.80	500	1	2	0	0	0
123	00 11 15	1.0	18.17	-103.80	3	5	2	27.9	33.80	500	1	2	0	0	0
124	00 11 16	1.0	18.92	-104.43	1	2	1	28.3	33.94	15	1	1	0	0	0
124	00 11 16	1.0	18.92	-104.43	1	2	1	28.3	33.94	0	0	0	1	2	0
124	00 11 16	1.0	18.92	-104.43	1	2	1	28.3	33.94	0	0	0	2	1	0
124	00 11 16	1.0	18.92	-104.43	1	2	1	28.3	33.94	30	3	9	0	0	0
124	00 11 16	1.0	18.92	-104.43	1	2	1	28.3	33.94	80	2	2	0	0	0
124	00 11 16	1.0	18.92	-104.43	1	2	1	28.3	33.94	500	3	2	0	0	0
124	00 11 16	1.0	18.92	-104.43	1	2	1	28.3	33.94	500	5	14	0	0	0
124	00 11 16	1.0	18.92	-104.43	1	2	1	28.3	33.94	500	1	1	0	0	0
124	00 11 16	1.0	18.92	-104.43	1	2	1	28.3	33.94	500	1	1	0	0	0
124	00 11 16	1.0	18.92	-104.43	1	2	1	28.3	33.94	500	8	2	0	0	0
125	00 11 20	1.0	18.08	-104.58	3	5	1	29.0	33.85	10	4	12	1	3	0
125	00 11 20	1.0	18.08	-104.58	3	5	1	29.0	33.85	30	4	11	2	3	0
125	00 11 20	1.0	18.08	-104.58	3	5	1	29.0	33.85	100	3	0	3	1	0
125	00 11 20	1.0	18.08	-104.58	3	5	1	29.0	33.85	400	1	1	0	0	0
125	00 11 20	1.0	18.08	-104.58	3	5	1	29.0	33.85	500	1	1	0	0	0
125	00 11 20	1.0	18.08	-104.58	3	5	1	29.0	33.85	500	1	1	0	0	0
125	00 11 20	1.0	18.08	-104.58	3	5	1	29.0	33.85	500	1	1	0	0	0
126	00 11 21	1.0	16.82	-104.82	3	1	3	28.7	33.62	10	3	8	0	0	0
126	00 11 21	1.0	16.82	-104.82	3	1	3	28.7	33.62	20	1	1	2	2	0
126	00 11 21	1.0	16.82	-104.82	3	1	3	28.7	33.62	30	1	1	3	2	0
126	00 11 21	1.0	16.82	-104.82	3	1	3	28.7	33.62	80	2	2	0	0	0
126	00 11 21	1.0	16.82	-104.82	3	1	3	28.7	33.62	500	3	3	0	0	0
126	00 11 21	1.0	16.82	-104.82	3	1	3	28.7	33.62	500	1	1	0	0	0
126	00 11 21	0.0	16.82	-104.82	-	-	-	-	-	30	0	1	0	0	0

Table 6. (*Jordan* dipnet sampling) continued.

Station <sup>1</sup> Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beaufort	Moon <sup>2</sup> Phase	Sky <sup>3</sup>	SST <sup>4</sup> (C)	SSS <sup>5</sup> (psu)	Fish <sup>6</sup> Species	Relative <sup>7</sup> Abund. (Fish)	Number Collected (Fish)	Squid <sup>8</sup> Type	Relative <sup>7</sup> Abund. (Squid)	Number Collected (Squid)
127	00 11 21	1.0	16.05	-106.60	3	5	2	28.5	33.68	10	5	12	1	3	0
127	00 11 21	1.0	16.05	-106.60	3	5	2	28.5	33.68	20	5	28	2	3	0
127	00 11 21	1.0	16.05	-106.60	3	5	2	28.5	33.68	30	4	7	3	1	0
127	00 11 21	1.0	16.05	-106.60	3	5	2	28.5	33.68	80	1	1	0	0	0
127	00 11 21	1.0	16.05	-106.60	3	5	2	28.5	33.68	100	3	3	0	0	0
127	00 11 21	1.0	16.05	-106.60	3	5	2	28.5	33.68	300	1	0	0	0	0
127	00 11 21	1.0	16.05	-106.60	3	5	2	28.5	33.68	400	1	0	0	0	0
128	00 11 22	1.0	15.50	-107.85	2	1	3	28.3	32.92	10	3	4	0	0	0
128	00 11 22	1.0	15.50	-107.85	2	1	3	28.3	32.92	20	2	0	2	2	0
128	00 11 22	1.0	15.50	-107.85	2	1	3	28.3	32.92	30	1	1	3	2	0
128	00 11 22	1.0	15.50	-107.85	2	1	3	28.3	32.92	400	8	0	0	0	0
129	00 11 22	1.0	14.77	-109.57	3	5	3	28.0	32.74	10	6	8	1	2	0
129	00 11 22	1.0	14.77	-109.57	3	5	3	28.0	32.74	20	4	11	2	4	0
129	00 11 22	1.0	14.77	-109.57	3	5	3	28.0	32.74	30	4	13	0	0	0
129	00 11 22	1.0	14.77	-109.57	3	5	3	28.0	32.74	80	1	1	0	0	0
129	00 11 22	1.0	14.77	-109.57	3	5	3	28.0	32.74	100	4	6	0	0	0
129	00 11 22	1.0	14.77	-109.57	3	5	3	28.0	32.74	300	1	1	0	0	0
129	00 11 22	1.0	14.77	-109.57	3	5	3	28.0	32.74	500	1	1	0	0	0
130	00 11 23	1.0	14.52	-110.08	4	1	2	28.0	32.67	20	1	0	2	2	0
130	00 11 23	1.0	14.52	-110.08	4	1	2	28.0	32.67	30	4	5	3	2	0
130	00 11 23	1.0	14.52	-110.08	4	1	2	28.0	32.67	400	1	1	0	0	0
130	00 11 23	1.0	14.52	-110.08	4	1	2	28.0	32.67	500	1	1	0	0	0
131	00 11 23	1.0	13.68	-111.48	5	5	3	27.8	33.02	10	4	6	1	3	0
131	00 11 23	1.0	13.68	-111.48	5	5	3	27.8	33.02	20	2	2	2	4	0
131	00 11 23	1.0	13.68	-111.48	5	5	3	27.8	33.02	30	2	3	0	0	0
131	00 11 23	1.0	13.68	-111.48	5	5	3	27.8	33.02	100	4	1	0	0	0
131	00 11 23	1.0	13.68	-111.48	5	5	3	27.8	33.02	300	1	0	0	0	0
131	00 11 23	1.0	13.68	-111.48	5	5	3	27.8	33.02	400	1	1	0	0	0
131	00 11 23	1.0	13.68	-111.48	5	5	3	27.8	33.02	500	3	1	0	0	0
132	00 11 24	1.0	12.75	-110.83	5	1	2	27.9	33.10	10	1	0	1	1	0
132	00 11 24	1.0	12.75	-110.83	5	1	2	27.9	33.10	20	2	2	2	1	0
132	00 11 24	1.0	12.75	-110.83	5	1	2	27.9	33.10	30	2	1	3	1	0
132	00 11 24	1.0	12.75	-110.83	5	1	2	27.9	33.10	500	2	0	0	0	0
	00 11 24	0.0	13.33	-111.25	-	-	-	-	-	20	0	1	0	0	0
	00 11 24	0.0	13.33	-111.25	-	-	-	-	-	30	0	1	0	0	0
133	00 11 24	1.0	13.43	-112.65	4	5	2	27.6	32.93	10	2	3	1	3	0
133	00 11 24	1.0	13.43	-112.65	4	5	2	27.6	32.93	20	2	3	2	3	0
133	00 11 24	1.0	13.43	-112.65	4	5	2	27.6	32.93	30	3	7	0	0	0
133	00 11 24	1.0	13.43	-112.65	4	5	2	27.6	32.93	100	3	1	0	0	0
133	00 11 24	1.0	13.43	-112.65	4	5	2	27.6	32.93	300	1	0	0	0	0
133	00 11 24	1.0	13.43	-112.65	4	5	2	27.6	32.93	400	1	4	0	0	0
133	00 11 24	1.0	13.43	-112.65	4	5	2	27.6	32.93	500	1	2	0	0	0
133	00 11 24	1.0	13.43	-112.65	4	5	2	27.6	32.93	500	1	1	0	0	0
133	00 11 24	1.0	13.43	-112.65	4	5	2	27.6	32.93	500	2	1	0	0	0
134	00 11 25	1.0	13.42	-113.67	4	1	2	27.6	32.87	10	3	5	0	0	0
134	00 11 25	1.0	13.42	-113.67	4	1	2	27.6	32.87	20	2	3	2	1	0
134	00 11 25	1.0	13.42	-113.67	4	1	2	27.6	32.87	30	2	2	0	0	0

Table 6. (*Jordan* dipnet sampling) continued.

Station <sup>1</sup> Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beaufort	Moon <sup>2</sup> Phase	Sky <sup>3</sup>	SST <sup>4</sup> (C)	SSS <sup>5</sup> (psu)	Fish <sup>6</sup> Species	Relative Abund. (Fish) <sup>7</sup>	Number Collected (Fish)	Squid <sup>8</sup> Type	Relative Abund. (Squid) <sup>7</sup>	Number Collected (Squid)
134	00 11 25	1.0	13.42	-113.67	4	1	2	27.6	32.87	400	1	0	0	0	0
	00 11 25	0.0	13.45	-113.02	4	-	-	-	-	30	0	2	0	0	0
135	00 11 25	1.0	14.23	-115.28	4	5	2	27.8	33.00	10	2	4	1	2	0
135	00 11 25	1.0	14.23	-115.28	4	5	2	27.8	33.00	20	2	6	2	3	0
135	00 11 25	1.0	14.23	-115.28	4	5	2	27.8	33.00	30	2	1	3	2	0
135	00 11 25	1.0	14.23	-115.28	4	5	2	27.8	33.00	100	3	5	0	0	0
135	00 11 25	1.0	14.23	-115.28	4	5	2	27.8	33.00	300	1	0	0	0	0
135	00 11 25	1.0	14.23	-115.28	4	5	2	27.8	33.00	400	1	1	0	0	0
136	00 11 26	1.0	14.77	-116.40	3	5	2	26.6	33.04	10	1	1	0	0	0
136	00 11 26	1.0	14.77	-116.40	3	5	2	26.6	33.04	0	0	0	2	2	0
136	00 11 26	1.0	14.77	-116.40	3	5	2	26.6	33.04	30	1	1	3	1	0
136	00 11 26	1.0	14.77	-116.40	3	5	2	26.6	33.04	100	1	1	0	0	0
	00 11 26	0.0	14.42	-115.65	-	-	-	-	-	30	0	2	0	0	0
137	00 11 26	1.0	15.65	-118.33	4	5	2	26.4	33.49	10	2	4	1	4	0
137	00 11 26	1.0	15.65	-118.33	4	5	2	26.4	33.49	20	2	2	2	2	0
137	00 11 26	1.0	15.65	-118.33	4	5	2	26.4	33.49	30	1	3	3	1	0
137	00 11 26	1.0	15.65	-118.33	4	5	2	26.4	33.49	100	4	14	0	0	0
138	00 11 27	1.0	16.25	-119.42	3	5	2	25.9	33.40	10	2	3	1	1	0
138	00 11 27	1.0	16.25	-119.42	3	5	2	25.9	33.40	20	4	26	2	2	0
138	00 11 27	1.0	16.25	-119.42	3	5	2	25.9	33.40	30	4	12	3	1	0
138	00 11 27	1.0	16.25	-119.42	3	5	2	25.9	33.40	100	2	3	0	0	0
138	00 11 27	1.0	16.25	-119.42	3	5	2	25.9	33.40	700	1	0	0	0	0
	00 11 27	0.0	15.95	-111.25	-	-	-	-	-	30	0	4	0	0	0
139	00 11 27	1.0	16.70	-118.67	3	5	2	26.0	33.55	10	2	5	1	3	0
139	00 11 27	1.0	16.70	-118.67	3	5	2	26.0	33.55	20	2	7	2	3	0
139	00 11 27	1.0	16.70	-118.67	3	5	2	26.0	33.55	30	2	6	3	2	0
139	00 11 27	1.0	16.70	-118.67	3	5	2	26.0	33.55	100	2	7	0	0	0
139	00 11 27	1.0	16.70	-118.67	3	5	2	26.0	33.55	400	1	2	0	0	0
140	00 11 28	1.0	16.85	-117.50	1	5	3	25.4	33.87	10	2	4	3	1	0
140	00 11 28	1.0	16.85	-117.50	1	5	3	25.4	33.87	30	4	11	0	0	0
140	00 11 28	1.0	16.85	-117.50	1	5	3	25.4	33.87	100	1	1	0	0	0
140	00 11 28	1.0	16.85	-117.50	1	5	3	25.4	33.87	500	1	1	0	0	0
140	00 11 28	1.0	16.85	-117.50	1	5	3	25.4	33.87	500	1	0	0	0	0
140	00 11 28	1.0	16.85	-117.50	1	5	3	25.4	33.87	300	1	1	0	0	0
140	00 11 28	1.0	16.85	-117.50	1	5	3	25.4	33.87	400	2	1	0	0	0
141	00 11 28	0.7	16.83	-117.52	1	5	3	25.5	33.88	0	0	0	1	1	0
141	00 11 28	0.7	16.83	-117.52	1	5	3	25.5	33.88	20	1	2	2	1	0
141	00 11 28	0.7	16.83	-117.52	1	5	3	25.5	33.88	30	1	2	0	0	0
141	00 11 28	0.7	16.83	-117.52	1	5	3	25.5	33.88	400	1	1	0	0	0
142	00 11 28	1.0	17.32	-116.05	3	1	1	24.4	34.03	10	2	4	1	2	0
142	00 11 28	1.0	17.32	-116.05	3	1	1	24.4	34.03	30	2	3	2	1	1
142	00 11 28	1.0	17.32	-116.05	3	1	1	24.4	34.03	100	4	10	3	1	0
143	00 11 29	1.0	17.60	-114.68	3	5	2	25.2	33.88	10	3	6	1	1	0
143	00 11 29	1.0	17.60	-114.68	3	5	2	25.2	33.88	20	1	1	2	3	0
143	00 11 29	1.0	17.60	-114.68	3	5	2	25.2	33.88	30	2	4	0	0	0
143	00 11 29	1.0	17.60	-114.68	3	5	2	25.2	33.88	500	1	1	0	0	0

Table 6. (*Jordan* dipnet sampling) continued.

Station <sup>1</sup> Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beaufort	Moon <sup>2</sup> Phase	Sky <sup>3</sup>	SST <sup>4</sup> (C)	SSS <sup>5</sup> (psu)	Fish <sup>6</sup> Species	Relative <sup>7</sup> Abund. (Fish)	Number Collected (Fish)	Squid <sup>8</sup> Type	Relative <sup>7</sup> Abund. (Squid)	Number Collected (Squid)
144	00 11 29	1.0	18.00	-112.82	3	1	2	26.3	33.72	10	2	5	1	3	0
144	00 11 29	1.0	18.00	-112.82	3	1	2	26.3	33.72	20	3	8	2	2	0
144	00 11 29	1.0	18.00	-112.82	3	1	2	26.3	33.72	30	3	7	0	0	0
144	00 11 29	1.0	18.00	-112.82	3	1	2	26.3	33.72	100	3	2	0	0	0
144	00 11 29	1.0	18.00	-112.82	3	1	2	26.3	33.72	300	1	0	0	0	0
144	00 11 29	1.0	18.00	-112.82	3	1	2	26.3	33.72	400	1	1	0	0	0
144	00 11 29	1.0	18.00	-112.82	3	1	2	26.3	33.72	500	1	1	0	0	0
145	00 11 30	1.0	18.30	-111.33	3	5	1	26.9	33.86	10	2	3	1	1	0
145	00 11 30	1.0	18.30	-111.33	3	5	1	26.9	33.86	20	2	2	2	2	0
145	00 11 30	1.0	18.30	-111.33	3	5	1	26.9	33.86	30	4	11	3	1	0
146	00 11 30	1.0	18.93	-109.87	4	5	1	26.1	33.82	10	3	5	1	2	0
146	00 11 30	1.0	18.93	-109.87	4	5	1	26.1	33.82	20	2	3	2	3	0
146	00 11 30	1.0	18.93	-109.87	4	5	1	26.1	33.82	100	3	5	1	2	0
146	00 11 30	1.0	18.93	-109.87	4	5	1	26.1	33.82	30	1	1	0	0	0
146	00 11 30	1.0	18.93	-109.87	4	5	1	26.1	33.82	80	3	1	0	0	0
146	00 11 30	1.0	18.93	-109.87	4	5	1	26.1	33.82	400	1	1	0	0	0
147	00 12 01	1.0	19.32	-110.77	0	5	1	26.2	33.86	30	5	16	2	1	0
147	00 12 01	1.0	19.32	-110.77	0	5	1	26.2	33.86	10	1	1	0	0	0
147	00 12 01	1.0	19.32	-110.77	0	5	1	26.2	33.86	80	1	1	0	0	0
147	00 12 01	1.0	19.32	-110.77	0	5	1	26.2	33.86	200	5	9	0	0	0
147	00 12 01	1.0	19.32	-110.77	0	5	1	26.2	33.86	500	1	1	0	0	0
147	00 12 01	1.0	19.32	-110.77	0	5	1	26.2	33.86	500	1	1	0	0	0
147	00 12 01	1.0	19.32	-110.77	0	5	1	26.2	33.86	500	1	1	0	0	0
147	00 12 01	1.0	19.32	-110.77	0	5	1	26.2	33.86	500	1	1	0	0	0
147	00 12 01	1.0	19.32	-110.77	0	5	1	26.2	33.86	500	1	1	0	0	0
147	00 12 01	1.0	19.32	-110.77	0	5	1	26.2	33.86	500	1	1	0	0	0
148	00 12 01	0.8	19.30	-110.77	0	5	1	26.2	33.85	10	2	2	0	0	0
148	00 12 01	0.8	19.30	-110.77	0	5	1	26.2	33.85	30	3	3	0	0	0
148	00 12 01	0.8	19.30	-110.77	0	5	1	26.2	33.85	90	1	0	0	0	0
148	00 12 01	0.8	19.30	-110.77	0	5	1	26.2	33.85	500	2	2	0	0	0
149	00 12 01	1.0	19.80	-110.97	3	2	1	25.5	33.95	20	1	1	0	0	0
149	00 12 01	1.0	19.80	-110.97	3	2	1	25.5	33.95	100	4	9	0	0	0
149	00 12 01	1.0	19.80	-110.97	3	2	1	25.5	33.95	500	1	1	3	1	1
150	00 12 02	1.0	20.67	-112.12	2	5	1	24.8	34.00	10	1	0	0	0	0
150	00 12 02	1.0	20.67	-112.12	2	5	1	24.8	34.00	20	2	4	2	1	0
150	00 12 02	1.0	20.67	-112.12	2	5	1	24.8	34.00	0	0	0	3	2	0
151	00 12 02	1.0	20.00	-114.05	3	2	2	23.6	34.07	10	1	3	1	3	0
151	00 12 02	1.0	20.00	-114.05	3	2	2	23.6	34.07	20	1	2	2	2	1
151	00 12 02	1.0	20.00	-114.05	3	2	2	23.6	34.07	30	1	2	3	1	0
151	00 12 02	1.0	20.00	-114.05	3	2	2	23.6	34.07	100	3	3	0	0	0
151	00 12 02	1.0	20.00	-114.05	3	2	2	23.6	34.07	700	2	0	0	0	0
152	00 12 03	1.0	19.40	-115.45	1	5	1	24.1	34.07	10	3	8	0	0	0
152	00 12 03	1.0	19.40	-115.45	1	5	1	24.1	34.07	0	0	0	3	1	0
152	00 12 03	1.0	19.40	-115.45	1	5	1	24.1	34.07	700	1	0	0	0	0
153	00 12 03	1.0	18.77	-117.05	3	2	2	24.1	34.20	20	1	1	1	1	0
153	00 12 03	1.0	18.77	-117.05	3	2	2	24.1	34.20	100	3	7	2	2	0

Table 6. (*Jordan* dipnet sampling) continued.

Station <sup>1</sup> Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beaufort	Moon <sup>2</sup> Phase	Sky <sup>3</sup>	SST <sup>4</sup> (C)	SSS <sup>5</sup> (psu)	Fish <sup>6</sup> Species	Relative <sup>7</sup> Abund. (Fish)	Number Collected (Fish)	Squid <sup>8</sup> Type	Relative <sup>7</sup> Abund. (Squid)	Number Collected (Squid)
153	00 12 03	1.0	18.77	-117.05	3	2	2	24.1	34.20	0	0	0	3	1	0
154	00 12 04	1.0	20.22	-117.38	3	5	3	22.6	34.10	0	0	0	2	1	0
155	00 12 04	1.0	21.68	-117.63	3	2	2	21.6	33.81	20	1	1	1	3	0
155	00 12 04	1.0	21.68	-117.63	3	2	2	21.6	33.81	100	4	23	2	2	0
155	00 12 04	1.0	21.68	-117.63	3	2	2	21.6	33.81	500	1	1	0	0	0
156	00 12 05	1.0	23.13	-118.23	1	5	3	20.8	33.72	0	0	0	2	1	0
157	00 12 05	1.0	24.62	-119.43	2	2	2	20.0	33.69	100	4	19	1	1	0
158	00 12 06	1.0	26.20	-119.08	1	5	1	18.3	33.40	500	1	1	0	0	0
158	00 12 06	1.0	26.20	-119.08	1	5	1	18.3	33.40	100	2	4	0	0	0
159	00 12 06	1.0	27.75	-118.53	2	3	2	18.3	33.33	100	5	30	0	0	0

<sup>1</sup> Records without Station Numbers reflect opportunistic or non-standard specimen collections.

<sup>2</sup> 1 = quarter moon; 2 = half moon; 3 = 3/4 moon; 4 = full moon; 5 = no moon; 6 = new moon.

<sup>3</sup> 1 = clear; 2 = partly cloudy; 3 = overcast; 4 = rain; 5 = other or unknown.

<sup>4</sup> SST = Sea Surface Temperature (Celsius)

<sup>5</sup> SSS = Sea Surface Salinity (practical salinity units)

<sup>6</sup> 005 = Unidentified flyingfish

010 = Oxyporhamphus micropterus

015 = Fodiator spp.

020 = Exocoetus spp.

030 = Unidentified 4-wing flyingfish

060 = Elassichthys

080 = Hemiramphidae (halfbeaks)

090 = Belonidae (needlefish)

100 = Myctophidae (lanternfish)

125 = Vinciguerria spp.

200 = Scombridae (tunas)

300 = Gempylidae (snake mackerel)

400 = Coryphaenidae (dolphinfish)

500 = Other

700 = Octopoda (pelagic octopus)

900 = Sea Snake

<sup>7</sup> 1 = "a couple" (1-3)

2 = "a few" (4-8); uncommon

3 = "several" (9-15); fairly common

4 = "common" (16-50)

5 = "abundant" (51-150)

6 = "superabundant" (150+)

7 = 1000's

8 = present

9 = "possibly present"

<sup>8</sup> 1 = Large (mantle length > 8 inches)

2 = Medium (3 inches ≤ mantle length ≤ 8 inches)

3 = Small (mantle length < 3 inches)

Table 7. Results of night-light dipnet sampling, *McArthur*, 28 July – 9 December 2000.

Station <sup>1</sup> Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beaufort	Moon <sup>2</sup> Phase	Sky <sup>3</sup>	SST <sup>4</sup> (C)	SSS <sup>5</sup> (psu)	Fish <sup>6</sup> Species	Relative Abund. (Fish)	Number Collected (Fish)	Squid <sup>8</sup> Type	Relative <sup>7</sup> Abund. (Squid)	Number Collected (Squid)
1	00 07 29	1.0	29.15	-119.72	5	5	3	18.8	33.52	100	3	7	2	2	0
1	00 07 29	1.0	29.15	-119.72	5	5	3	18.8	33.52	60	3	7	3	2	0
2	00 07 30	1.0	26.18	-120.55	4	5	2	20.8	33.78	100	3	10	-	2	2
2	00 07 30	1.0	26.18	-120.55	4	5	2	20.8	33.78	60	4	15	0	0	0
3	00 07 31	1.0	23.98	-123.12	4	5	3	21.3	33.86	100	3	8	3	2	0
3	00 07 31	1.0	23.98	-123.12	4	5	3	21.3	33.86	60	4	13	2	2	0
3	00 07 31	1.0	23.98	-123.12	4	5	3	21.3	33.86	0	0	0	1	1	0
4	00 08 01	1.0	21.77	-125.72	4	5	3	23.0	34.84	100	2	3	1	1	0
4	00 08 01	1.0	21.77	-125.72	4	5	3	23.0	34.84	60	5	31	2	2	0
4	00 08 01	1.0	21.77	-125.72	4	5	3	23.0	34.84	0	0	0	3	2	0
5	00 08 02	1.0	20.00	-123.67	3	5	3	24.7	34.84	100	2	5	1	1	0
5	00 08 02	1.0	20.00	-123.67	3	5	3	24.7	34.84	60	4	16	2	2	0
5	00 08 02	1.0	20.00	-123.67	3	5	3	24.7	34.84	0	0	0	3	1	0
	00 08 03	0.0	19.78	-123.23	3	5	2	24.8	-	30	0	1	0	0	0
6	00 08 03	1.0	19.50	-121.50	4	5	3	24.7	34.70	30	1	1	1	2	0
6	00 08 03	1.0	19.50	-121.50	4	5	3	24.7	34.70	60	2	5	2	2	0
6	00 08 03	1.0	19.50	-121.50	4	5	3	24.7	34.70	500	1	1	3	1	0
7	00 08 04	1.0	21.77	-119.25	4	1	1	24.5	34.17	30	1	1	1	2	0
7	00 08 04	1.0	21.77	-119.25	4	1	1	24.5	34.17	60	2	3	0	0	0
7	00 08 04	1.0	21.77	-119.25	4	1	1	24.5	34.17	20	4	9	0	0	0
8	00 08 05	1.0	19.83	-119.17	3	2	1	25.4	32.64	30	1	0	2	1	0
9	00 08 06	1.0	16.93	-120.25	0	2	2	26.9	32.82	100	1	1	3	3	0
9	00 08 06	1.0	16.93	-120.25	0	2	2	26.9	32.82	500	1	2	2	4	0
10	00 08 07	1.0	14.45	-121.78	4	2	2	26.9	32.47	20	1	1	2	1	0
10	00 08 07	1.0	14.45	-121.78	4	2	2	26.9	32.47	30	1	1	0	0	0
10	00 08 07	1.0	14.45	-121.78	4	2	2	26.9	32.47	60	1	1	0	0	0
10	00 08 07	1.0	14.45	-121.78	4	2	2	26.9	32.47	10	1	3	0	0	0
10	00 08 07	1.0	14.45	-121.78	4	2	2	26.9	32.47	400	2	3	0	0	0
10	00 08 07	1.0	14.45	-121.78	4	2	2	26.9	32.47	100	3	13	0	0	0
10	00 08 07	1.0	14.45	-121.78	4	2	2	26.9	32.47	500	1	1	0	0	0
11	00 08 08	1.0	11.43	-123.42	4	2	2	27.2	32.10	100	2	2	1	3	0
11	00 08 08	1.0	11.43	-123.42	4	2	2	27.2	32.10	20	1	2	2	2	0
11	00 08 08	1.0	11.43	-123.42	4	2	2	27.2	32.10	500	2	3	1	2	0
12	00 08 09	1.0	9.13	-125.12	0	2	2	28.3	31.72	10	3	9	1	3	0
12	00 08 09	1.0	9.13	-125.12	0	2	2	28.3	31.72	20	1	1	2	3	0
12	00 08 09	1.0	9.13	-125.12	0	2	2	28.3	31.72	100	5	13	3	2	0
12	00 08 09	1.0	9.13	-125.12	0	2	2	28.3	31.72	400	3	1	0	0	0
13	00 08 10	1.0	10.70	-127.58	0	3	2	28.4	31.71	10	3	10	1	1	0
13	00 08 10	1.0	10.70	-127.58	0	3	2	28.4	31.71	20	1	3	2	2	0
13	00 08 10	1.0	10.70	-127.58	0	3	2	28.4	31.71	30	1	1	3	2	0
13	00 08 10	1.0	10.70	-127.58	0	3	2	28.4	31.71	100	4	23	0	0	0
13	00 08 10	1.0	10.70	-127.58	0	3	2	28.4	31.71	400	1	1	0	0	0
14	00 08 11	1.0	12.05	-129.90	0	3	1	28.0	32.18	0	0	0	1	2	0
14	00 08 11	1.0	12.05	-129.90	0	3	1	28.0	32.18	100	5	20	2	3	0
14	00 08 11	1.0	12.05	-129.90	0	3	1	28.0	32.18	0	0	0	3	2	0
15	00 08 12	1.0	12.53	-130.62	0	3	1	27.7	32.18	10	1	2	1	3	0
15	00 08 12	1.0	12.53	-130.62	0	3	1	27.7	32.18	20	1	1	2	4	0

Table 7. (*McArthur* dipnet sampling) continued.

Station <sup>1</sup> Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beaufort	Moon <sup>2</sup> Phase	Sky <sup>3</sup>	SST <sup>4</sup> (C)	SSS <sup>5</sup> (psu)	Fish <sup>6</sup> Species	Relative <sup>7</sup> Abund. (Fish)	Number Collected (Fish)	Squid <sup>8</sup> Type	Relative <sup>7</sup> Abund. (Squid)	Number Collected (Squid)
15	00 08 12	1.0	12.53	-130.62	0	3	1	27.7	32.18	90	2	3	3	3	0
16	00 08 12	1.0	13.42	-132.17	1	5	4	28.2	31.75	100	3	9	2	1	0
17	00 08 13	1.0	10.75	-132.72	1	4	2	28.6	31.78	100	4	19	3	1	0
17	00 08 13	1.0	10.75	-132.72	1	4	2	28.6	31.78	10	2	3	2	4	0
17	00 08 13	1.0	10.75	-132.72	1	4	2	28.6	31.78	0	0	0	1	2	0
18	00 08 14	1.0	9.78	-132.95	0	4	2	28.2	31.41	10	1	2	1	3	0
18	00 08 14	1.0	9.78	-132.95	0	4	2	28.2	31.41	100	2	5	2	2	0
18	00 08 14	1.0	9.78	-132.95	0	4	2	28.2	31.41	0	0	0	3	1	0
19	00 08 14	1.0	7.85	-133.85	5	4	2	28.2	32.25	100	4	17	0	0	0
19	00 08 14	1.0	7.85	-133.85	5	4	2	28.2	32.25	10	2	4	0	0	0
19	00 08 14	1.0	7.85	-133.85	5	4	2	28.2	32.25	400	4	0	0	0	0
19	00 08 14	1.0	7.85	-133.85	5	4	2	28.2	32.25	500	1	0	0	0	0
19	00 08 14	1.0	7.85	-133.85	5	4	2	28.2	32.25	30	1	0	0	0	0
20	00 08 15	1.0	7.37	-134.65	4	4	2	28.0	32.60	0	0	0	1	1	0
20	00 08 15	1.0	7.37	-134.65	4	4	2	28.0	32.60	0	0	0	2	1	0
21	00 08 15	1.0	6.65	-135.78	4	4	2	27.8	33.04	10	1	2	1	3	0
21	00 08 15	1.0	6.65	-135.78	4	4	2	27.8	33.04	20	2	8	2	2	3
21	00 08 15	1.0	6.65	-135.78	4	4	2	27.8	33.04	30	3	8	3	1	2
21	00 08 15	1.0	6.65	-135.78	4	4	2	27.8	33.04	100	4	12	0	0	0
21	00 08 16	0.0	6.08	-136.75	-	-	-	-	-	10	0	3	0	0	0
22	00 08 16	1.0	6.08	-136.75	4	4	2	27.8	32.83	0	0	0	1	1	0
22	00 08 16	1.0	6.08	-136.75	4	4	2	27.8	32.83	20	1	1	2	1	0
22	00 08 16	1.0	6.08	-136.75	4	4	2	27.8	32.83	400	1	1	0	0	0
23	00 08 16	1.0	5.52	-138.27	3	4	2	27.8	33.08	10	2	2	1	2	0
23	00 08 16	1.0	5.52	-138.27	3	4	2	27.8	33.08	20	2	5	2	1	0
23	00 08 16	1.0	5.52	-138.27	3	4	2	27.8	33.08	30	1	0	0	0	0
23	00 08 16	1.0	5.52	-138.27	3	4	2	27.8	33.08	400	1	2	0	0	0
23	00 08 16	1.0	5.52	-138.27	3	4	2	27.8	33.08	100	3	5	0	0	0
24	00 08 17	1.0	5.15	-140.70	5	5	1	28.0	32.91	10	2	2	1	2	0
24	00 08 17	1.0	5.15	-140.70	5	5	1	28.0	32.91	100	3	2	2	2	0
25	00 08 18	1.0	6.20	-140.98	4	5	2	28.1	32.58	10	2	3	1	1	0
25	00 08 18	1.0	6.20	-140.98	4	5	2	28.1	32.58	0	0	0	2	1	0
25	00 08 18	0.0	6.20	-140.98	-	-	-	-	-	30	0	1	0	0	0
26	00 08 18	1.0	8.25	-141.73	3	5	4	28.3	32.08	10	1	3	1	4	0
26	00 08 18	1.0	8.25	-141.73	3	5	4	28.3	32.08	100	5	26	2	3	0
26	00 08 18	1.0	8.25	-141.73	3	5	4	28.3	32.08	300	1	0	0	0	0
26	00 08 18	0.0	8.28	-141.90	-	-	-	-	-	30	0	1	0	0	0
27	00 08 19	1.0	8.38	-142.83	4	5	4	28.3	31.72	20	1	1	1	1	0
27	00 08 19	1.0	8.38	-142.83	4	5	4	28.3	31.72	100	1	0	0	0	0
28	00 08 19	1.0	8.70	-145.05	3	5	3	28.6	32.31	100	6	24	1	4	0
28	00 08 19	1.0	8.70	-145.05	3	5	3	28.6	32.31	20	1	1	2	3	0
28	00 08 19	1.0	8.70	-145.05	3	5	3	28.6	32.31	30	1	2	3	3	0
28	00 08 19	1.0	8.70	-145.05	3	5	3	28.6	32.31	300	1	0	0	0	0
29	00 08 20	1.0	8.53	-146.10	4	5	3	28.4	32.29	20	1	1	1	1	0
29	00 08 20	1.0	8.53	-146.10	4	5	3	28.4	32.29	100	2	1	2	1	0
30	00 08 20	1.0	8.83	-148.13	4	5	3	28.4	32.28	300	1	0	1	3	0
30	00 08 20	1.0	8.83	-148.13	4	5	3	28.4	32.28	30	1	1	2	4	0

Table 7. (*McArthur* dipnet sampling) continued.

Station <sup>1</sup> Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beaufort	Moon <sup>2</sup> Phase	Sky <sup>3</sup>	SST <sup>4</sup> (C)	SSS <sup>5</sup> (psu)	Fish <sup>6</sup> Species	Relative <sup>7</sup> Abund. (Fish)	Number Collected (Fish)	Squid <sup>8</sup> Type	Relative <sup>7</sup> Abund. (Squid)	Number Collected (Squid)
30	00 08 20	1.0	8.83	-148.13	4	5	3	28.4	32.28	100	4	14	3	2	0
31	00 08 21	1.0	6.23	-148.82	3	5	3	28.4	32.03	100	3	8	1	2	0
31	00 08 21	1.0	6.23	-148.82	3	5	3	28.4	32.03	10	1	1	2	2	0
	00 08 24	0.0	19.08	-156.03	-	-	-	-	-	30	0	1	0	0	0
	00 08 31	0.0	20.57	-155.28	-	-	-	-	-	30	0	1	0	0	0
	00 09 01	0.0	19.17	-152.78	5	-	-	-	-	20	0	1	0	0	0
	00 09 02	0.0	16.98	-148.95	-	-	-	-	-	20	0	1	0	0	0
32	00 09 03	1.0	12.82	-142.00	5	1	2	27.7	34.63	5	1	0	0	0	0
32	00 09 03	1.0	12.82	-142.00	5	1	2	27.7	34.63	10	1	1	0	0	0
32	00 09 03	1.0	12.82	-142.00	5	1	2	27.7	34.63	100	4	6	0	0	0
	00 09 04	0.0	12.60	-141.75	-	-	-	-	-	30	0	1	0	0	0
33	00 09 04	1.0	10.50	-139.17	4	2	2	27.8	33.49	10	2	4	1	4	0
33	00 09 04	1.0	10.50	-139.17	4	2	2	27.8	33.49	20	2	4	2	2	0
33	00 09 04	1.0	10.50	-139.17	4	2	2	27.8	33.49	100	4	20	1	1	0
34	00 09 05	1.0	9.68	-138.20	5	2	2	27.9	33.28	20	2	3	1	2	0
34	00 09 05	1.0	9.68	-138.20	5	2	2	27.9	33.28	300	1	0	2	2	0
34	00 09 05	1.0	9.68	-138.20	5	2	2	27.9	33.28	30	2	1	3	2	0
	00 09 05	0.0	9.68	-138.20	-	-	-	-	-	20	0	1	0	0	0
35	00 09 05	1.0	8.02	-136.35	4	2	3	28.2	34.11	10	3	6	1	4	0
35	00 09 05	1.0	8.02	-136.35	4	2	3	28.2	34.11	20	4	19	2	2	0
35	00 09 05	1.0	8.02	-136.35	4	2	3	28.2	34.11	30	2	1	0	0	0
35	00 09 05	1.0	8.02	-136.35	4	2	3	28.2	34.11	500	1	2	0	0	0
35	00 09 05	1.0	8.02	-136.35	4	2	3	28.2	34.11	100	4	17	0	0	0
36	00 09 06	1.0	7.40	-135.43	4	2	4	27.9	34.31	20	2	1	1	1	0
36	00 09 06	1.0	7.40	-135.43	4	2	4	27.9	34.31	10	2	2	2	1	0
36	00 09 06	1.0	7.40	-135.43	4	2	4	27.9	34.31	30	2	0	3	1	0
37	00 09 06	1.0	5.90	-133.63	5	5	3	27.7	34.89	10	1	0	0	0	0
37	00 09 06	1.0	5.90	-133.63	5	5	3	27.7	34.89	20	4	9	0	0	0
37	00 09 06	1.0	5.90	-133.63	5	5	3	27.7	34.89	30	1	0	0	0	0
37	00 09 06	1.0	5.90	-133.63	5	5	3	27.7	34.89	100	4	6	0	0	0
37	00 09 06	1.0	5.90	-133.63	5	5	3	27.7	34.89	300	1	0	0	0	0
	00 09 06	0.0	5.88	-133.62	-	-	-	-	-	20	0	1	0	0	0
	00 09 07	0.0	5.17	-132.73	5	-	-	-	-	30	0	1	0	0	0
38	00 09 07	1.0	3.75	-131.03	4	3	2	25.7	34.77	100	4	19	0	0	0
38	00 09 07	1.0	3.75	-131.03	4	3	2	25.7	34.77	20	1	1	0	0	0
39	00 09 08	1.0	3.00	-130.18	3	3	2	25.4	34.73	100	1	2	1	3	0
39	00 09 08	1.0	3.00	-130.18	3	3	2	25.4	34.73	20	2	0	2	2	0
40	00 09 08	1.0	2.02	-128.97	4	3	2	26.2	34.88	100	4	16	1	3	0
40	00 09 08	1.0	2.02	-128.97	4	3	2	26.2	34.88	20	2	3	2	2	0
40	00 09 08	1.0	2.02	-128.97	4	3	2	26.2	34.88	0	0	0	1	1	0
41	00 09 09	1.0	0.00	-126.53	4	3	2	24.2	35.04	100	4	19	0	0	0
41	00 09 09	1.0	0.00	-126.53	4	3	2	24.2	35.04	20	1	1	0	0	0
42	00 09 10	1.0	-1.03	-126.28	4	3	2	25.2	35.32	100	2	1	1	1	0
42	00 09 10	1.0	-1.03	-126.28	4	3	2	25.2	35.32	20	1	1	2	1	0
42	00 09 10	1.0	-1.03	-126.28	4	3	2	25.2	35.32	0	0	0	3	1	0
43	00 09 10	1.0	-3.22	-126.23	5	4	2	25.0	35.24	100	2	2	1	2	0
43	00 09 10	1.0	-3.22	-126.23	5	4	2	25.0	35.24	20	1	1	0	0	0

Table 7. (*McArthur* dipnet sampling) continued.

Station <sup>1</sup> Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beaufort	Moon <sup>2</sup> Phase	Sky <sup>3</sup>	SST <sup>4</sup> (C)	SSS <sup>5</sup> (psu)	Fish <sup>6</sup> Species	Relative <sup>7</sup> Abund. (Fish)	Number Collected (Fish)	Squid <sup>8</sup> Type	Relative <sup>7</sup> Abund. (Squid)	Number Collected (Squid)
44	00 09 11	1.0	-4.50	-126.17	4	4	2	24.8	35.17	20	1	1	1	1	0
44	00 09 11	1.0	-4.50	-126.17	4	4	2	24.8	35.17	100	2	3	2	1	0
44	00 09 11	1.0	-4.50	-126.17	4	4	2	24.8	35.17	300	1	0	3	1	0
45	00 09 11	1.0	-4.75	-124.55	4	4	2	24.8	35.15	20	2	3	2	3	0
45	00 09 11	1.0	-4.75	-124.55	4	4	2	24.8	35.15	100	2	2	0	0	0
46	00 09 12	1.0	-4.52	-121.23	4	4	2	24.8	35.03	20	3	8	1	2	0
46	00 09 12	1.0	-4.52	-121.23	4	4	2	24.8	35.03	100	3	4	2	2	0
46	00 09 12	1.0	-4.52	-121.23	4	4	2	24.8	35.03	30	2	2	3	2	0
47	00 09 13	1.0	-4.47	-120.28	4	4	2	25.0	35.36	20	1	1	0	0	0
47	00 09 13	1.0	-4.47	-120.28	4	4	2	25.0	35.36	100	1	0	2	1	0
	00 09 13	0.0	-4.50	-120.98	-	-	-	-	-	20	0	2	0	0	0
48	00 09 13	1.0	-4.37	-118.45	5	4	2	24.3	35.09	20	2	1	2	4	0
48	00 09 13	1.0	-4.37	-118.45	5	4	2	24.3	35.09	100	3	0	0	0	0
49	00 09 14	1.0	-4.33	-117.65	4	4	2	24.8	35.16	20	1	0	0	0	0
50	00 09 14	1.0	-4.25	-115.88	4	4	2	24.3	35.25	100	5	19	0	0	0
50	00 09 14	1.0	-4.25	-115.88	4	4	2	24.3	35.25	5	1	0	0	0	0
51	00 09 15	1.0	-4.05	-112.63	5	4	1	23.3	35.05	20	1	1	1	2	0
51	00 09 15	1.0	-4.05	-112.63	5	4	1	23.3	35.05	100	2	1	2	3	0
51	00 09 15	1.0	-4.05	-112.63	5	4	1	23.3	35.05	60	1	1	0	0	0
52	00 09 16	1.0	-3.55	-111.97	3	4	2	23.1	34.95	20	1	1	1	1	0
52	00 09 16	1.0	-3.55	-111.97	3	4	2	23.1	34.95	100	1	1	2	1	0
52	00 09 16	1.0	-3.55	-111.97	3	4	2	23.1	34.95	0	0	0	3	1	0
53	00 09 16	1.0	-1.65	-111.50	4	5	2	22.5	34.77	100	5	24	1	4	0
53	00 09 16	1.0	-1.65	-111.50	4	5	2	22.5	34.77	0	0	0	2	5	0
54	00 09 17	1.0	1.20	-110.83	4	5	1	25.0	34.12	20	2	1	1	4	0
54	00 09 17	1.0	1.20	-110.83	4	5	1	25.0	34.12	10	2	0	2	3	0
54	00 09 17	1.0	1.20	-110.83	4	5	1	25.0	34.12	100	4	19	1	2	0
55	00 09 18	1.0	2.07	-110.58	3	3	2	25.4	34.36	20	1	0	0	0	0
56	00 09 18	1.0	4.10	-110.05	3	5	3	25.3	34.28	100	4	8	1	2	0
56	00 09 18	1.0	4.10	-110.05	3	5	3	25.3	34.28	20	1	3	2	2	0
56	00 09 18	1.0	4.10	-110.05	3	5	3	25.3	34.28	30	1	2	3	1	0
57	00 09 19	1.0	3.93	-109.33	5	3	2	25.1	34.29	100	1	0	0	0	0
57	00 09 19	1.0	3.93	-109.33	5	3	2	25.1	34.29	20	1	0	2	1	0
	00 09 19	0.0	3.93	-109.33	-	-	-	-	-	20	0	1	0	0	0
00 09 19	0.0	4.18	-109.93	-	-	-	-	-	-	20	0	1	0	0	0
58	00 09 19	1.0	3.20	-107.27	5	5	2	25.4	34.20	10	2	0	1	2	0
58	00 09 19	1.0	3.20	-107.27	5	5	2	25.4	34.20	20	3	10	2	3	0
58	00 09 19	1.0	3.20	-107.27	5	5	2	25.4	34.20	30	1	1	1	1	0
58	00 09 19	1.0	3.20	-107.27	5	5	2	25.4	34.20	100	4	4	0	0	0
58	00 09 19	1.0	3.20	-107.27	5	5	2	25.4	34.20	300	1	0	0	0	0
59	00 09 20	0.8	2.92	-106.50	4	1	3	24.3	34.23	20	1	1	0	0	0
59	00 09 20	0.8	2.92	-106.50	4	1	3	24.3	34.23	100	2	1	0	0	0
60	00 09 20	1.0	3.85	-104.80	5	5	3	26.0	34.20	10	2	3	1	2	0
60	00 09 20	1.0	3.85	-104.80	5	5	3	26.0	34.20	20	1	1	2	1	0
60	00 09 20	1.0	3.85	-104.80	5	5	3	26.0	34.20	30	2	1	0	0	0
60	00 09 20	1.0	3.85	-104.80	5	5	3	26.0	34.20	300	1	0	0	0	0
60	00 09 20	1.0	3.85	-104.80	5	5	3	26.0	34.20	100	4	12	0	0	0

Table 7. (*McArthur* dipnet sampling) continued.

Station <sup>1</sup> Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beaufort	Moon <sup>2</sup> Phase	Sky <sup>3</sup>	SST <sup>4</sup> (C)	SSS <sup>5</sup> (psu)	Fish <sup>6</sup> Species	Relative Abund. <sup>7</sup> (Fish)	Number Collected (Fish)	Squid <sup>8</sup> Type	Relative <sup>7</sup> Abund. <sup>7</sup> (Squid)	Number Collected (Squid)
61	00 09 21	1.0	3.75	-101.50	5	5	3	26.4	33.82	10	2	4	1	3	0
61	00 09 21	1.0	3.75	-101.50	5	5	3	26.4	33.82	20	2	0	2	2	0
61	00 09 21	1.0	3.75	-101.50	5	5	3	26.4	33.82	30	1	0	3	1	0
61	00 09 21	1.0	3.75	-101.50	5	5	3	26.4	33.82	100	4	14	0	0	0
62	00 09 22	1.0	4.15	-100.28	2	5	3	26.7	33.54	30	1	1	0	0	0
62	00 09 22	1.0	4.15	-100.28	2	5	3	26.7	33.54	10	1	1	2	1	0
62	00 09 22	1.0	4.15	-100.28	2	5	3	26.7	33.54	500	1	1	0	0	0
62	00 09 22	1.0	4.15	-100.28	2	5	3	26.7	33.54	100	1	0	0	0	0
63	00 09 22	1.0	4.72	-98.05	3	5	3	26.9	33.37	20	1	1	2	3	0
63	00 09 22	1.0	4.72	-98.05	3	5	3	26.9	33.37	30	2	4	1	3	0
63	00 09 22	1.0	4.72	-98.05	3	5	3	26.9	33.37	100	4	21	0	0	0
63	00 09 22	1.0	4.72	-98.05	3	5	3	26.9	33.37	10	3	10	0	0	0
63	00 09 22	1.0	4.72	-98.05	3	5	3	26.9	33.37	300	1	0	0	0	0
64	00 09 23	1.0	5.03	-96.95	3	1	3	26.8	33.46	100	1	1	1	1	0
64	00 09 23	1.0	5.03	-96.95	3	1	3	26.8	33.46	20	1	1	2	1	0
64	00 09 23	1.0	5.03	-96.95	3	1	3	26.8	33.46	0	0	0	3	1	0
65	00 09 23	1.0	5.68	-95.15	3	5	1	27.4	33.36	10	2	3	1	3	0
65	00 09 23	1.0	5.68	-95.15	3	5	1	27.4	33.36	20	1	1	2	2	0
65	00 09 23	1.0	5.68	-95.15	3	5	1	27.4	33.36	100	4	10	1	1	0
65	00 09 23	1.0	5.68	-95.15	3	5	1	27.4	33.36	200	1	1	0	0	0
65	00 09 23	1.0	5.68	-95.15	3	5	1	27.4	33.36	30	1	0	0	0	0
66	00 09 24	1.0	7.08	-92.47	5	5	1	27.3	33.37	20	1	1	1	1	0
66	00 09 24	1.0	7.08	-92.47	5	5	1	27.3	33.37	100	2	3	2	1	0
66	00 09 24	1.0	7.08	-92.47	5	5	1	27.3	33.37	0	0	0	3	1	0
67	00 09 25	1.0	6.95	-91.32	6	5	4	27.1	33.08	10	5	2	0	0	0
67	00 09 25	1.0	6.95	-91.32	6	5	4	27.1	33.08	20	2	2	0	0	0
67	00 09 25	1.0	6.95	-91.32	6	5	4	27.1	33.08	30	1	0	0	0	0
67	00 09 25	1.0	6.95	-91.32	6	5	4	27.1	33.08	100	1	0	0	0	0
67	00 09 25	1.0	6.95	-91.32	6	5	4	27.1	33.08	300	1	0	0	0	0
68	00 09 26	1.0	8.03	-88.77	5	5	2	27.3	33.35	10	4	10	1	3	0
68	00 09 26	1.0	8.03	-88.77	5	5	2	27.3	33.35	20	4	8	2	2	0
68	00 09 26	1.0	8.03	-88.77	5	5	2	27.3	33.35	30	2	3	3	1	0
68	00 09 26	1.0	8.03	-88.77	5	5	2	27.3	33.35	100	2	1	0	0	0
69	00 09 27	1.0	7.28	-88.67	4	5	2	27.3	32.85	100	1	1	0	0	0
69	00 09 27	1.0	7.28	-88.67	4	5	2	27.3	32.85	20	2	2	2	1	0
69	00 09 27	1.0	7.28	-88.67	4	5	2	27.3	32.85	30	1	1	0	0	0
69	00 09 27	1.0	7.28	-88.67	4	5	2	27.3	32.85	10	2	1	0	0	0
70	00 09 27	1.0	8.75	-87.63	4	5	2	27.8	33.11	10	5	15	0	0	0
70	00 09 27	1.0	8.75	-87.63	4	5	2	27.8	33.11	20	4	15	0	0	0
70	00 09 27	1.0	8.75	-87.63	4	5	2	27.8	33.11	30	2	5	0	0	0
70	00 09 27	1.0	8.75	-87.63	4	5	2	27.8	33.11	100	1	1	0	0	0
70	00 09 27	1.0	8.75	-87.63	4	5	2	27.8	33.11	400	3	2	0	0	0
71	00 09 28	1.0	8.35	-87.08	5	5	3	27.5	33.09	30	3	4	0	0	0
71	00 09 28	1.0	8.35	-87.08	5	5	3	27.5	33.09	10	3	4	2	1	0
71	00 09 28	1.0	8.35	-87.08	5	5	3	27.5	33.09	0	0	0	3	1	0
72	00 09 28	1.0	9.05	-85.42	5	5	2	27.8	32.45	10	2	1	0	0	0
72	00 09 28	1.0	9.05	-85.42	5	5	2	27.8	32.45	30	2	3	0	0	0

Table 7. (*McArthur* dipnet sampling) continued.

Station <sup>1</sup> Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beaufort	Moon <sup>2</sup> Phase	Sky <sup>3</sup>	SST <sup>4</sup> (C)	SSS <sup>5</sup> (psu)	Fish <sup>6</sup> Species	Relative <sup>7</sup> Abund. (Fish)	Number Collected (Fish)	Squid <sup>8</sup> Type	Relative <sup>7</sup> Abund. (Squid)	Number Collected (Squid)
72	00 09 28	1.0	9.05	-85.42	5	5	2	27.8	32.45	500	1	2	0	0	0
73	00 10 05	1.0	8.53	-84.42	1	2	3	27.6	31.96	10	1	2	1	1	0
73	00 10 05	1.0	8.53	-84.42	1	2	3	27.6	31.96	30	1	1	3	3	0
73	00 10 05	1.0	8.53	-84.42	1	2	3	27.6	31.96	500	1	3	0	0	0
74	00 10 06	1.0	6.93	-86.42	1	2	1	27.8	33.39	20	4	14	2	4	0
74	00 10 06	1.0	6.93	-86.42	1	2	1	27.8	33.39	400	1	1	3	3	0
74	00 10 06	1.0	6.93	-86.42	1	2	1	27.8	33.39	500	1	1	0	0	0
74	00 10 06	1.0	6.93	-86.42	1	2	1	27.8	33.39	30	3	4	0	0	0
74	00 10 06	1.0	6.93	-86.42	1	2	1	27.8	33.39	10	3	6	0	0	0
74	00 10 06	1.0	6.93	-86.42	1	2	1	27.8	33.39	100	2	2	0	0	0
75	00 10 07	1.0	5.68	-82.35	3	2	2	27.5	33.07	10	1	1	2	3	0
75	00 10 07	1.0	5.68	-82.35	3	2	2	27.5	33.07	20	1	1	0	0	0
75	00 10 07	1.0	5.68	-82.35	3	2	2	27.5	33.07	400	1	0	0	0	0
75	00 10 07	1.0	5.68	-82.35	3	2	2	27.5	33.07	100	3	8	0	0	0
76	00 10 08	1.0	4.05	-92.13	3	3	3	27.0	33.44	100	4	15	2	3	0
76	00 10 08	1.0	4.05	-92.13	3	3	3	27.0	33.44	20	1	1	0	0	0
77	00 10 09	1.0	1.38	-94.47	3	3	2	25.5	33.75	10	1	0	2	3	0
77	00 10 09	1.0	1.38	-94.47	3	3	2	25.5	33.75	30	1	2	0	0	0
77	00 10 09	1.0	1.38	-94.47	3	3	2	25.5	33.75	300	1	0	0	0	0
77	00 10 09	1.0	1.38	-94.47	3	3	2	25.5	33.75	100	7	5	0	0	0
77	00 10 09	1.0	1.38	-94.47	3	3	2	25.5	33.75	500	1	1	0	0	0
78	00 10 10	1.0	0.18	-95.83	4	3	2	21.0	34.72	100	6	45	2	4	0
78	00 10 10	1.0	0.18	-95.83	4	3	2	21.0	34.72	0	0	0	3	1	0
80	00 10 11	1.0	-2.32	-97.78	3	4	1	21.5	34.80	20	2	2	1	1	0
80	00 10 11	1.0	-2.32	-97.78	3	4	1	21.5	34.80	100	4	20	2	1	0
80	00 10 11	1.0	-2.32	-97.78	3	4	1	21.5	34.80	0	0	0	3	2	0
81	00 10 12	1.0	-4.88	-100.08	3	4	2	21.9	34.90	20	3	7	2	2	0
81	00 10 12	1.0	-4.88	-100.08	3	4	2	21.9	34.90	30	1	0	0	0	0
81	00 10 12	1.0	-4.88	-100.08	3	4	2	21.9	34.90	100	2	5	0	0	0
81	00 10 12	1.0	-4.88	-100.08	3	4	2	21.9	34.90	500	4	11	0	0	0
83	00 10 13	1.0	-7.35	-102.30	5	4	2	23.2	35.20	100	3	1	2	2	0
83	00 10 13	1.0	-7.35	-102.30	5	4	2	23.2	35.20	30	2	4	0	0	0
84	00 10 14	1.0	-9.80	-104.52	5	4	2	23.5	35.41	100	4	2	1	1	0
84	00 10 14	1.0	-9.80	-104.52	5	4	2	23.5	35.41	500	3	1	3	2	0
85	00 10 15	1.0	-10.02	-102.67	5	5	3	23.2	35.30	100	4	6	1	1	0
85	00 10 15	1.0	-10.02	-102.67	5	5	3	23.2	35.30	500	3	3	2	1	0
85	00 10 15	1.0	-10.02	-102.67	5	5	3	23.2	35.30	30	2	0	3	1	0
86	00 10 16	1.0	-9.77	-99.63	5	5	2	22.5	35.30	30	1	1	1	2	0
86	00 10 16	1.0	-9.77	-99.63	5	5	2	22.5	35.30	20	2	2	2	2	0
86	00 10 16	1.0	-9.77	-99.63	5	5	2	22.5	35.30	500	1	3	0	0	0
86	00 10 16	1.0	-9.77	-99.63	5	5	2	22.5	35.30	100	5	14	0	0	0
87	00 10 17	1.3	-9.58	-96.30	4	5	3	21.9	35.35	30	2	3	1	2	0
87	00 10 17	1.3	-9.58	-96.30	4	5	3	21.9	35.35	20	2	3	2	3	0
87	00 10 17	1.3	-9.58	-96.30	4	5	3	21.9	35.35	100	4	10	3	2	0
88	00 10 18	1.0	-9.38	-93.60	4	5	4	21.3	35.38	100	3	6	1	2	0
88	00 10 18	1.0	-9.38	-93.60	4	5	4	21.3	35.38	500	4	13	3	1	0

Table 7. (*McArthur* dipnet sampling) continued.

Station <sup>1</sup> Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beaufort	Moon <sup>2</sup> Phase	Sky <sup>3</sup>	SST <sup>4</sup> (C)	SSS <sup>5</sup> (psu)	Fish <sup>6</sup> Species	Relative Abund. <sup>7</sup> (Fish)	Number Collected (Fish)	Squid <sup>8</sup> Type	Relative Abund. <sup>7</sup> (Squid)	Number Collected (Squid)
88	00 10 18	1.0	-9.38	-93.60	4	5	4	21.3	35.38	400	1	0	0	0	0
89	00 10 19	1.0	-9.30	-90.95	3	5	3	21.2	35.27	10	1	0	3	3	0
89	00 10 19	1.0	-9.30	-90.95	3	5	3	21.2	35.27	30	2	2	0	0	0
89	00 10 19	1.0	-9.30	-90.95	3	5	3	21.2	35.27	100	4	17	0	0	0
89	00 10 19	1.0	-9.30	-90.95	3	5	3	21.2	35.27	500	4	9	0	0	0
90	00 10 20	1.0	-10.53	-88.80	3	5	2	20.1	35.35	100	4	9	1	3	0
90	00 10 20	1.0	-10.53	-88.80	3	5	2	20.1	35.35	500	5	9	0	0	0
90	00 10 20	1.0	-10.53	-88.80	3	5	2	20.1	35.35	20	1	0	0	0	0
91	00 10 21	1.0	-12.05	-86.30	3	5	3	19.2	35.30	100	4	15	1	2	0
91	00 10 21	1.0	-12.05	-86.30	3	5	3	19.2	35.30	500	1	1	2	3	0
91	00 10 21	1.0	-12.05	-86.30	3	5	3	19.2	35.30	0	0	0	3	1	0
92	00 10 22	1.0	-12.40	-83.67	5	5	2	18.7	35.26	100	4	3	1	1	0
92	00 10 22	1.0	-12.40	-83.67	5	5	2	18.7	35.26	500	5	10	0	0	0
93	00 10 23	1.0	-12.48	-81.05	5	5	3	18.6	35.10	100	4	3	1	4	0
93	00 10 23	1.0	-12.48	-81.05	5	5	3	18.6	35.10	500	4	6	2	3	0
93	00 10 23	1.0	-12.48	-81.05	5	5	3	18.6	35.10	30	1	0	3	1	0
94	00 10 24	1.0	-12.70	-78.33	5	5	3	19.0	35.14	80	5	11	1	1	0
94	00 10 24	1.0	-12.70	-78.33	5	5	3	19.0	35.14	30	1	0	0	0	0
94	00 10 24	1.0	-12.70	-78.33	5	5	3	19.0	35.14	500	4	3	0	0	0
95	00 10 29	1.0	-11.17	-78.02	1	5	3	18.9	34.60	500	5	20	2	1	0
96	00 10 30	1.0	-8.72	-79.03	1	1	2	17.1	34.86	500	3	5	0	0	0
97	00 10 31	1.0	-8.43	-80.23	3	1	2	18.5	34.90	80	4	9	2	3	0
97	00 10 31	1.0	-8.43	-80.23	3	1	2	18.5	34.90	500	4	5	0	0	0
98	00 11 01	1.0	-8.15	-82.90	4	5	3	20.5	35.15	500	5	14	2	3	0
99	00 11 02	1.0	-6.98	-81.08	1	1	2	17.9	34.90	80	8	3	2	2	0
99	00 11 02	1.0	-6.98	-81.08	1	1	2	17.9	34.90	500	2	2	3	2	0
100	00 11 03	1.2	-6.03	-81.38	2	2	2	18.2	34.92	500	2	3	0	0	0
101	00 11 04	1.0	-3.63	-80.90	3	2	1	22.2	33.90	500	2	4	3	2	0
102	00 11 05	1.0	-1.97	-82.87	3	2	3	18.8	34.78	80	2	1	2	3	0
102	00 11 05	1.0	-1.97	-82.87	3	2	3	18.8	34.78	100	4	0	0	0	0
102	00 11 05	1.0	-1.97	-82.87	3	2	3	18.8	34.78	500	1	1	0	0	0
103	00 11 06	1.0	-0.40	-82.87	1	2	2	25.2	32.59	10	1	1	2	2	0
103	00 11 06	1.0	-0.40	-82.87	1	2	2	25.2	32.59	20	2	4	0	0	0
103	00 11 06	1.0	-0.40	-82.87	1	2	2	25.2	32.59	100	4	20	0	0	0
103	00 11 06	1.0	-0.40	-82.87	1	2	2	25.2	32.59	80	2	3	0	0	0
104	00 11 07	1.0	-0.02	-80.62	3	2	3	25.2	32.61	10	2	2	1	3	0
104	00 11 07	1.0	-0.02	-80.62	3	2	3	25.2	32.61	30	1	1	0	0	0
104	00 11 07	1.0	-0.02	-80.62	3	2	3	25.2	32.61	90	1	1	0	0	0
104	00 11 07	1.0	-0.02	-80.62	3	2	3	25.2	32.61	80	1	1	0	0	0
104	00 11 07	1.0	-0.02	-80.62	3	2	3	25.2	32.61	100	2	1	0	0	0
105	00 11 08	1.0	2.42	-81.48	5	3	2	27.2	32.84	10	2	1	2	3	0
105	00 11 08	1.0	2.42	-81.48	5	3	2	27.2	32.84	20	2	1	0	0	0
105	00 11 08	1.0	2.42	-81.48	5	3	2	27.2	32.84	30	1	1	0	0	0
105	00 11 08	1.0	2.42	-81.48	5	3	2	27.2	32.84	100	4	17	0	0	0
106	00 11 09	1.0	1.98	-79.12	5	3	2	26.5	32.69	30	1	1	3	1	0
106	00 11 09	1.0	1.98	-79.12	5	3	2	26.5	32.69	80	1	1	0	0	0
106	00 11 09	1.0	1.98	-79.12	5	3	2	26.5	32.69	100	8	4	0	0	0

Table 7. (*McArthur* dipnet sampling) continued.

Station <sup>1</sup> Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beaufort	Moon <sup>2</sup> Phase	Sky <sup>3</sup>	SST <sup>4</sup> (C)	SSS <sup>5</sup> (psu)	Fish <sup>6</sup> Species	Relative <sup>7</sup> Abund. (Fish)	Number Collected (Fish)	Squid <sup>8</sup> Type	Relative <sup>7</sup> Abund. (Squid)	Number Collected (Squid)
107	00 11 10	1.0	3.20	-77.92	4	4	3	27.5	30.70	90	1	1	2	4	0
107	00 11 10	1.0	3.20	-77.92	4	4	3	27.5	30.70	500	8	4	3	1	0
108	00 11 11	1.0	4.83	-77.68	1	4	3	26.7	28.88	100	4	27	2	1	0
108	00 11 11	1.0	4.83	-77.68	1	4	3	26.7	28.88	900	1	0	0	0	0
108	00 11 11	1.0	4.83	-77.68	1	4	3	26.7	28.88	700	1	0	0	0	0
109	00 11 12	1.0	6.55	-77.93	0	4	1	27.9	28.30	100	1	1	2	4	0
109	00 11 12	1.0	6.55	-77.93	0	4	1	27.9	28.30	300	1	0	0	0	0
109	00 11 12	1.0	6.55	-77.93	0	4	1	27.9	28.30	400	1	1	0	0	0
109	00 11 12	1.0	6.55	-77.93	0	4	1	27.9	28.30	500	5	20	0	0	0
109	00 11 12	1.0	6.55	-77.93	0	4	1	27.9	28.30	900	1	0	0	0	0
109	00 11 12	1.0	6.55	-77.93	0	4	1	27.9	28.30	700	1	0	0	0	0
110	00 11 18	1.0	7.75	-79.60	3	5	3	28.0	28.70	15	1	1	2	1	0
110	00 11 18	1.0	7.75	-79.60	3	5	3	28.0	28.70	30	1	1	0	0	0
110	00 11 18	1.0	7.75	-79.60	3	5	3	28.0	28.70	80	1	1	0	0	0
111	00 11 19	1.0	5.05	-79.15	4	5	2	27.2	30.81	10	4	17	2	4	0
111	00 11 19	1.0	5.05	-79.15	4	5	2	27.2	30.81	20	3	4	3	3	0
111	00 11 19	1.0	5.05	-79.15	4	5	2	27.2	30.81	30	2	2	0	0	0
111	00 11 19	1.0	5.05	-79.15	4	5	2	27.2	30.81	100	3	4	0	0	0
111	00 11 19	1.0	5.05	-79.15	4	5	2	27.2	30.81	400	1	0	0	0	0
111	00 11 19	1.0	5.05	-79.15	4	5	2	27.2	30.81	200	2	4	0	0	0
111	00 11 19	1.0	5.05	-79.15	4	5	2	27.2	30.81	500	2	3	0	0	0
112	00 11 20	1.0	5.22	-82.02	3	5	3	26.9	32.90	10	4	14	2	4	0
112	00 11 20	1.0	5.22	-82.02	3	5	3	26.9	32.90	20	3	7	3	1	0
112	00 11 20	1.0	5.22	-82.02	3	5	3	26.9	32.90	30	2	1	0	0	0
112	00 11 20	1.0	5.22	-82.02	3	5	3	26.9	32.90	100	3	8	0	0	0
112	00 11 20	1.0	5.22	-82.02	3	5	3	26.9	32.90	200	1	1	0	0	0
112	00 11 20	1.0	5.22	-82.02	3	5	3	26.9	32.90	400	1	0	0	0	0
113	00 11 21	1.0	5.38	-85.43	3	5	2	27.2	33.01	10	3	0	1	1	0
113	00 11 21	1.0	5.38	-85.43	3	5	2	27.2	33.01	20	2	1	2	3	0
113	00 11 21	1.0	5.38	-85.43	3	5	2	27.2	33.01	30	2	1	0	0	0
113	00 11 21	1.0	5.38	-85.43	3	5	2	27.2	33.01	100	4	10	0	0	0
114	00 11 22	1.0	5.53	-87.35	2	6	1	27.3	33.20	10	3	4	2	3	0
114	00 11 22	1.0	5.53	-87.35	2	6	1	27.3	33.20	20	2	4	3	2	0
114	00 11 22	1.0	5.53	-87.35	2	6	1	27.3	33.20	80	1	2	0	0	0
114	00 11 22	1.0	5.53	-87.35	2	6	1	27.3	33.20	100	5	22	0	0	0
115	00 11 23	1.0	5.70	-90.63	3	6	1	27.7	33.30	100	3	7	2	3	0
115	00 11 23	1.0	5.70	-90.63	3	6	1	27.7	33.30	10	3	4	3	3	0
115	00 11 23	1.0	5.70	-90.63	3	6	1	27.7	33.30	80	3	7	0	0	0
115	00 11 23	1.0	5.70	-90.63	3	6	1	27.7	33.30	400	6	3	0	0	0
115	00 11 23	1.0	5.70	-90.63	3	6	1	27.7	33.30	20	2	1	0	0	0
115	00 11 23	1.0	5.70	-90.63	3	6	1	27.7	33.30	30	2	3	0	0	0
116	00 11 24	1.0	5.85	-93.65	1	6	2	27.2	33.10	20	1	1	2	2	0
116	00 11 24	1.0	5.85	-93.65	1	6	2	27.2	33.10	10	2	3	0	0	0
116	00 11 24	1.0	5.85	-93.65	1	6	2	27.2	33.10	100	2	5	0	0	0
117	00 11 25	1.0	6.82	-96.43	2	6	1	27.7	32.70	10	6	27	2	4	0
117	00 11 25	1.0	6.82	-96.43	2	6	1	27.7	32.70	20	4	7	0	0	0
117	00 11 25	1.0	6.82	-96.43	2	6	1	27.7	32.70	100	4	35	0	0	0

Table 7. (*McArthur* dipnet sampling) continued.

Station <sup>1</sup> Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beaufort	Moon <sup>2</sup> Phase	Sky <sup>3</sup>	SST <sup>4</sup> (C)	SSS <sup>5</sup> (psu)	Fish <sup>6</sup> Species	Relative Abund. <sup>7</sup> (Fish)	Number Collected (Fish)	Squid <sup>8</sup> Type	Relative Abund. <sup>7</sup> (Squid)	Number Collected (Squid)
117	00 11 25	1.0	6.82	-96.43	2	6	1	27.7	32.70	500	3	5	0	0	0
117	00 11 25	1.0	6.82	-96.43	2	6	1	27.7	32.70	300	1	0	0	0	0
118	00 11 26	1.0	7.50	-99.32	4	5	1	27.4	32.90	10	4	14	2	4	0
118	00 11 26	1.0	7.50	-99.32	4	5	1	27.4	32.90	20	2	5	3	1	0
118	00 11 26	1.0	7.50	-99.32	4	5	1	27.4	32.90	100	4	17	0	0	0
118	00 11 26	1.0	7.50	-99.32	4	5	1	27.4	32.90	300	1	0	0	0	0
118	00 11 26	1.0	7.50	-99.32	4	5	1	27.4	32.90	400	2	0	0	0	0
119	00 11 27	1.0	8.28	-102.10	4	1	2	27.6	33.08	10	4	12	1	2	0
119	00 11 27	1.0	8.28	-102.10	4	1	2	27.6	33.08	20	3	2	2	3	0
119	00 11 27	1.0	8.28	-102.10	4	1	2	27.6	33.08	30	2	1	3	3	0
119	00 11 27	1.0	8.28	-102.10	4	1	2	27.6	33.08	400	1	1	0	0	0
119	00 11 27	1.0	8.28	-102.10	4	1	2	27.6	33.08	100	1	0	0	0	0
119	00 11 27	1.0	8.28	-102.10	4	1	2	27.6	33.08	500	3	0	0	0	0
120	00 11 28	1.0	8.93	-105.17	2	1	1	27.6	33.00	20	6	67	2	2	0
120	00 11 28	1.0	8.93	-105.17	2	1	1	27.6	33.00	10	5	5	3	1	0
120	00 11 28	1.0	8.93	-105.17	2	1	1	27.6	33.00	80	1	2	0	0	0
120	00 11 28	1.0	8.93	-105.17	2	1	1	27.6	33.00	100	3	7	0	0	0
120	00 11 28	1.0	8.93	-105.17	2	1	1	27.6	33.00	30	6	22	0	0	0
120	00 11 28	1.0	8.93	-105.17	2	1	1	27.6	33.00	300	1	0	0	0	0
120	00 11 28	1.0	8.93	-105.17	2	1	1	27.6	33.00	700	1	0	0	0	0
120	00 11 28	1.0	8.93	-105.17	2	1	1	27.6	33.00	400	1	0	0	0	0
121	00 11 29	1.0	9.40	-108.35	5	1	1	28.5	33.12	10	5	8	0	0	0
121	00 11 29	1.0	9.40	-108.35	5	1	1	28.5	33.12	20	4	5	0	0	0
121	00 11 29	1.0	9.40	-108.35	5	1	1	28.5	33.12	100	4	7	0	0	0
121	00 11 29	1.0	9.40	-108.35	5	1	1	28.5	33.12	400	1	0	0	0	0
121	00 11 29	1.0	9.40	-108.35	5	1	1	28.5	33.12	30	4	2	0	0	0
121	00 11 29	1.0	9.40	-108.35	5	1	1	28.5	33.12	300	1	0	0	0	0
122	00 11 30	1.0	10.28	-109.15	3	5	1	28.5	33.20	10	3	0	2	1	0
122	00 11 30	1.0	10.28	-109.15	3	5	1	28.5	33.20	30	1	2	3	2	0
123	00 11 30	1.0	10.47	-110.87	5	1	2	28.4	33.18	10	5	14	2	3	0
123	00 11 30	1.0	10.47	-110.87	5	1	2	28.4	33.18	20	4	8	3	1	0
123	00 11 30	1.0	10.47	-110.87	5	1	2	28.4	33.18	30	3	1	0	0	0
123	00 11 30	1.0	10.47	-110.87	5	1	2	28.4	33.18	100	3	2	0	0	0
123	00 11 30	1.0	10.47	-110.87	5	1	2	28.4	33.18	300	1	0	0	0	0
123	00 11 30	1.0	10.47	-110.87	5	1	2	28.4	33.18	400	1	1	0	0	0
124	00 12 01	1.0	12.37	-112.73	4	1	2	28.4	33.66	10	1	2	2	2	0
124	00 12 01	1.0	12.37	-112.73	4	1	2	28.4	33.66	20	3	3	3	1	0
124	00 12 01	1.0	12.37	-112.73	4	1	2	28.4	33.66	30	3	3	0	0	0
124	00 12 01	1.0	12.37	-112.73	4	1	2	28.4	33.66	100	2	0	0	0	0
125	00 12 02	1.0	15.08	-113.47	3	1	2	27.5	33.76	10	2	2	2	2	0
125	00 12 02	1.0	15.08	-113.47	3	1	2	27.5	33.76	20	2	2	0	0	0
125	00 12 02	1.0	15.08	-113.47	3	1	2	27.5	33.76	30	2	2	0	0	0
125	00 12 02	1.0	15.08	-113.47	3	1	2	27.5	33.76	100	3	8	0	0	0
125	00 12 02	1.0	15.08	-113.47	3	1	2	27.5	33.76	400	1	0	0	0	0
126	00 12 03	1.0	17.72	-115.13	3	2	1	25.3	34.50	30	1	1	2	2	0
126	00 12 03	1.0	17.72	-115.13	3	2	1	25.3	34.50	100	1	1	3	2	0
126	00 12 03	1.0	17.72	-115.13	3	2	1	25.3	34.50	3	4	0	0	0	0

Table 7. (*McArthur* dipnet sampling) continued.

Station <sup>1</sup> Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beaufort	Moon <sup>2</sup> Phase	Sky <sup>3</sup>	SST <sup>4</sup> (C)	SSS <sup>5</sup> (psu)	Fish <sup>6</sup> Species	Relative <sup>7</sup> Abund. (Fish)	Number Collected (Fish)	Squid <sup>8</sup> Type	Relative <sup>7</sup> Abund. (Squid)	Number Collected (Squid)
127	00 12 04	1.0	21.02	-114.18	1	5	3	23.9	34.50	100	2	3	2	2	0
127	00 12 04	1.0	21.02	-114.18	1	5	3	23.9	34.50	400	1	2	0	0	0
127	00 12 04	1.0	21.02	-114.18	1	5	3	23.9	34.50	700	1	0	0	0	0
128	00 12 05	1.0	23.58	-113.48	3	3	1	22.7	34.60	100	4	18	2	3	0
128	00 12 05	1.0	23.58	-113.48	3	3	1	22.7	34.60	20	1	0	0	0	0
129	00 12 07	1.0	26.13	-115.38	3	2	2	19.9	33.80	100	4	13	2	2	0
129	00 12 07	1.0	26.13	-115.38	3	2	2	19.9	33.80	400	1	0	0	0	0
130	00 12 07	1.0	28.90	-116.53	3	2	2	18.3	33.70	100	3	7	0	0	0

<sup>1</sup> Records without Station Numbers reflect opportunistic or non-standard specimen collections.

<sup>2</sup> 1 = quarter moon; 2 = half moon; 3 = 3/4 moon; 4 = full moon; 5 = no moon; 6 = new moon.

<sup>3</sup> 1 = clear; 2 = partly cloudy; 3 = overcast; 4 = rain; 5 = other or unknown.

<sup>4</sup> SST = Sea Surface Temperature (Celsius)

<sup>5</sup> SSS = Sea Surface Salinity (practical salinity units)

<sup>6</sup> 005 = Unidentified flyingfish

010 = Oxyporhamphus micropterus

015 = Fodiator spp.

020 = Exocoetus spp.

030 = Unidentified 4-wing flyingfish

060 = Elassichthys

080 = Hemiramphidae (halfbeaks)

090 = Belonidae (needlefish)

100 = Myctophidae (lanternfish)

125 = Vinciguerria spp.

200 = Scombridae (tunas)

300 = Gempylidae (snake mackerel)

400 = Coryphaenidae (dolphinfish)

500 = Other

700 = Octopoda (pelagic octopus)

900 = Sea Snake

<sup>7</sup> 1 = "a couple" (1-3)

2 = "a few" (4-8); uncommon

3 = "several" (9-15); fairly common

4 = "common" (16-50)

5 = "abundant" (51-150)

6 = "superabundant" (150+)

7 = 1000's

8 = present

9 = "possibly present"

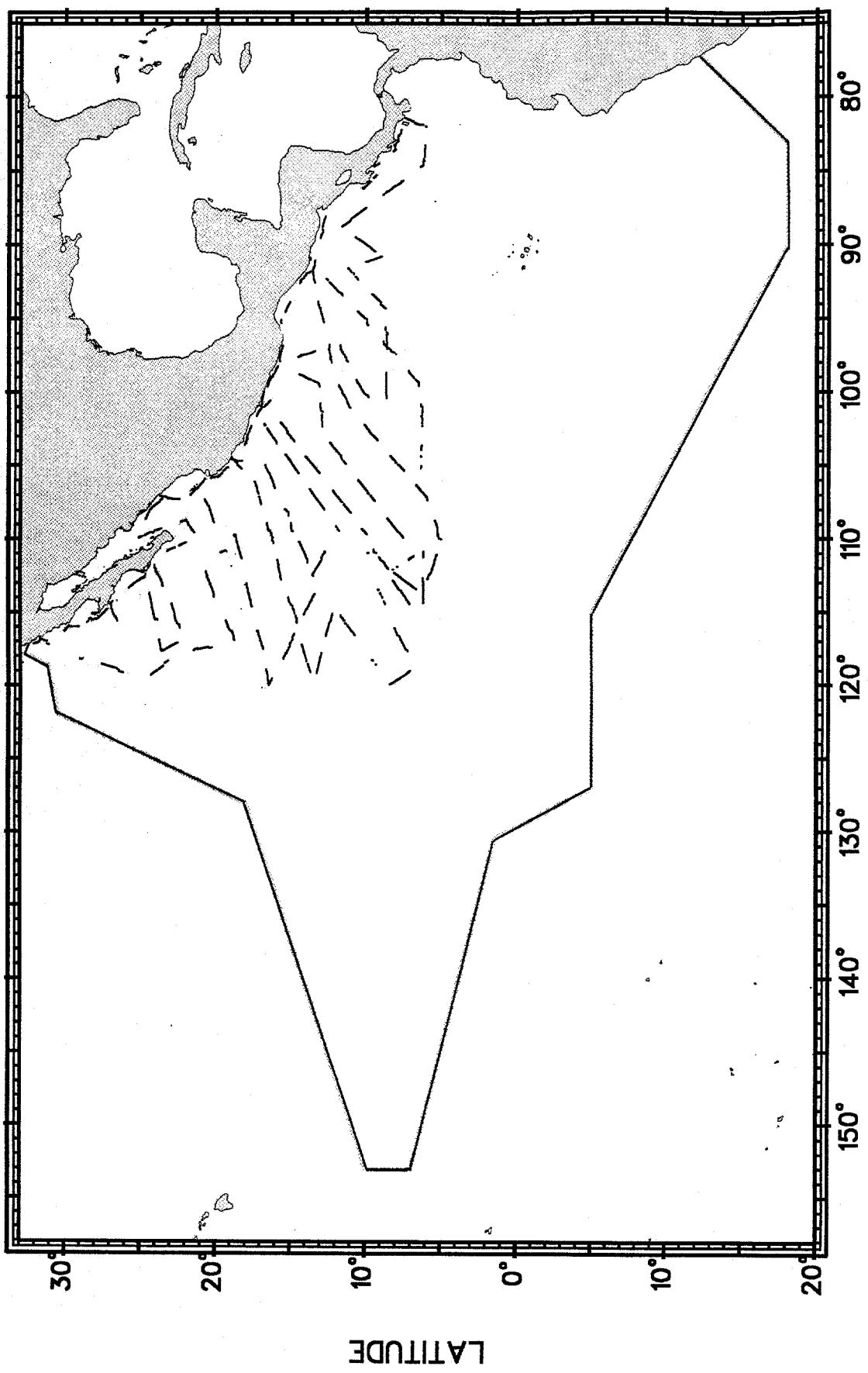
<sup>8</sup> 1 = Large (mantle length > 8 inches)

2 = Medium (3 inches ≤ mantle length ≤ 8 inches)

3 = Small (mantle length < 3 inches)

Table 8. Sea striders (*Halobates* spp.) collected from the *Jordan* and the *McArthur*, 28 July – 9 December 2000.

Species	No. of Stations with Samples	No. of Individuals Collected
<i>H. sobrinus</i>	117	8309
<i>H. micans</i>	143	2459
<i>H. sericeus</i>	15	336
<i>H. splendens</i>	21	57



WEST LONGITUDE  
LATITUDE

Figure 1. Tracklines, Jordan, 29 July – 9 December 2000. The tracklines are indicated by the dashed lines; the study area boundary is indicated by the solid line.

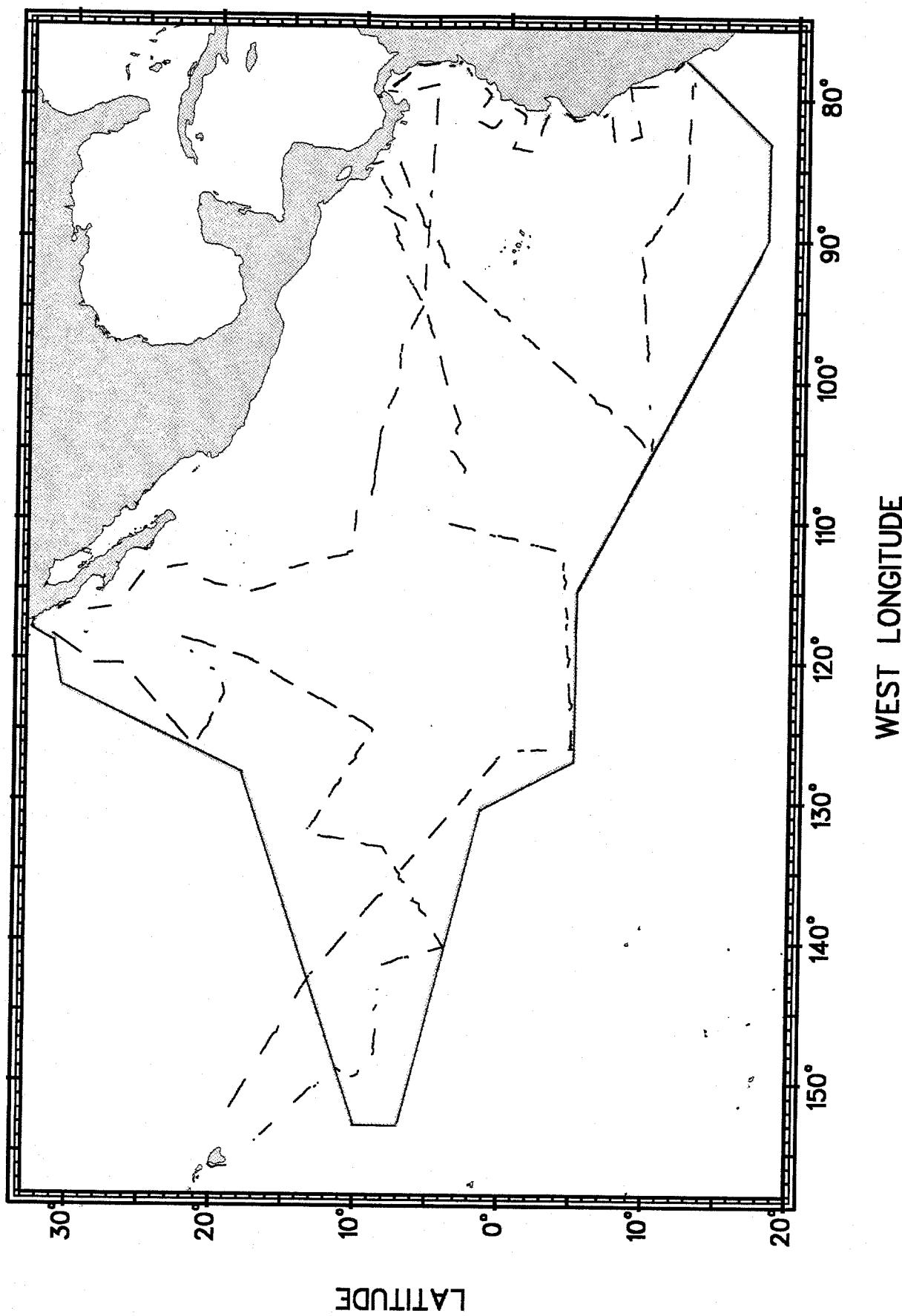


Figure 2. Tracklines, *McArthur*, 28 July – 9 December 2000. The tracklines are indicated by the dashed lines; the study area boundary is indicated by the solid line.

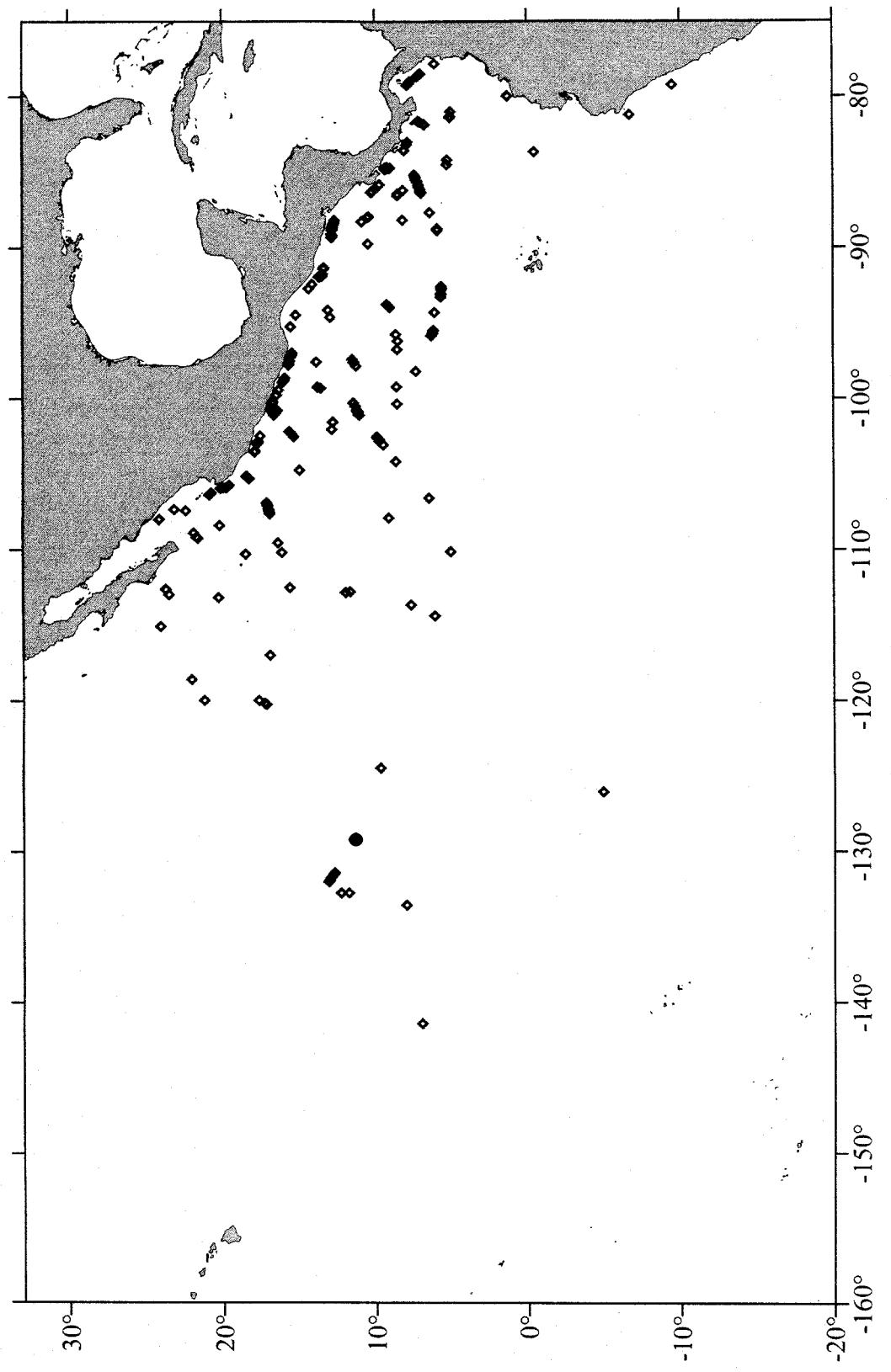


Figure 3. Locations of olive ridley turtle (*Lepidochelys olivacea*) sightings recorded from the *Jordan* and the *McArthur*, 28 July – 9 December 2000.

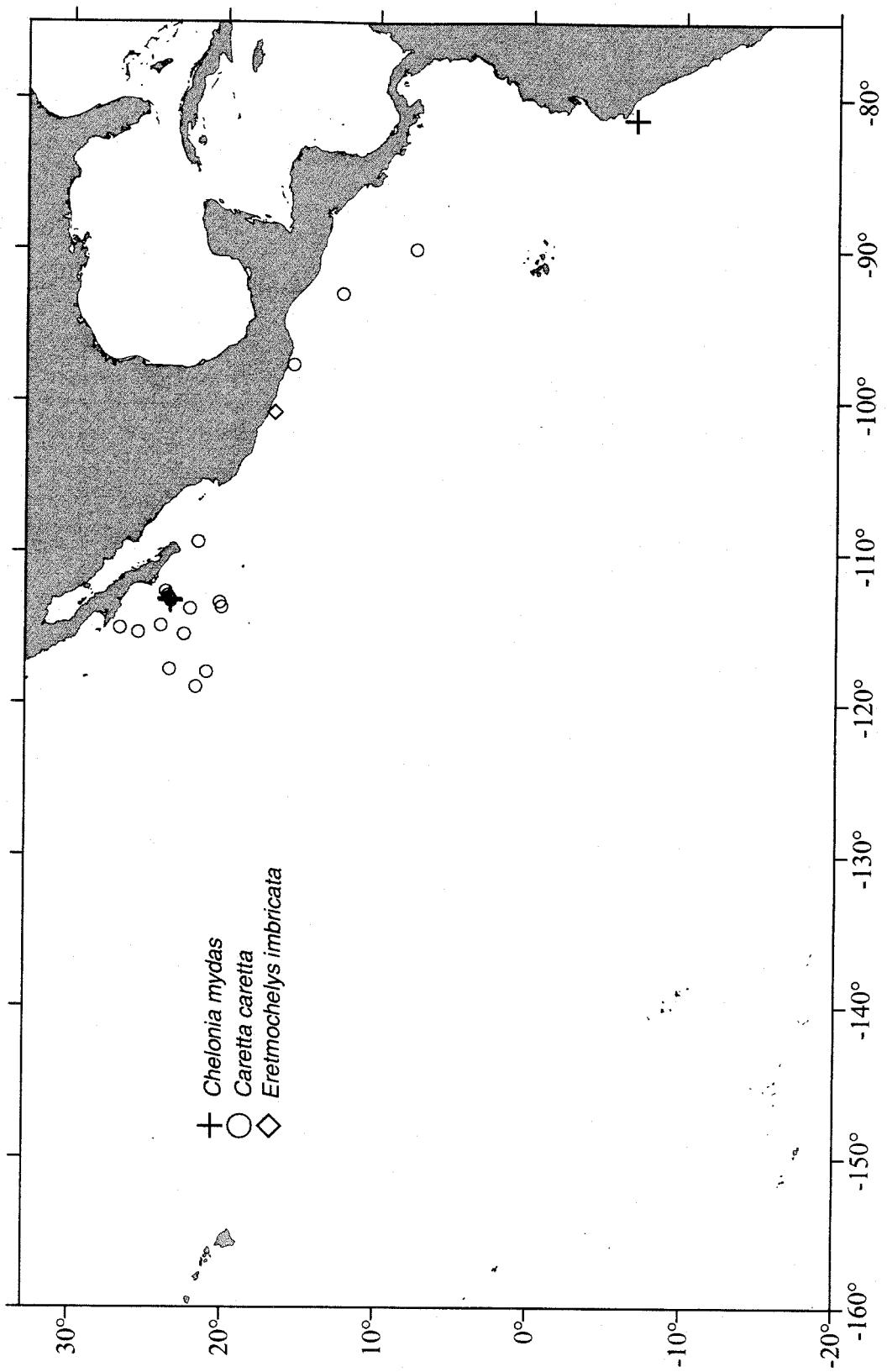


Figure 4. Locations of green turtle (*Chelonia mydas*), loggerhead turtle (*Caretta caretta*), and hawksbill turtle (*Eretmochelys imbricata*) sightings recorded from the Jordan and the McArthur, 28 July – 9 December 2000.

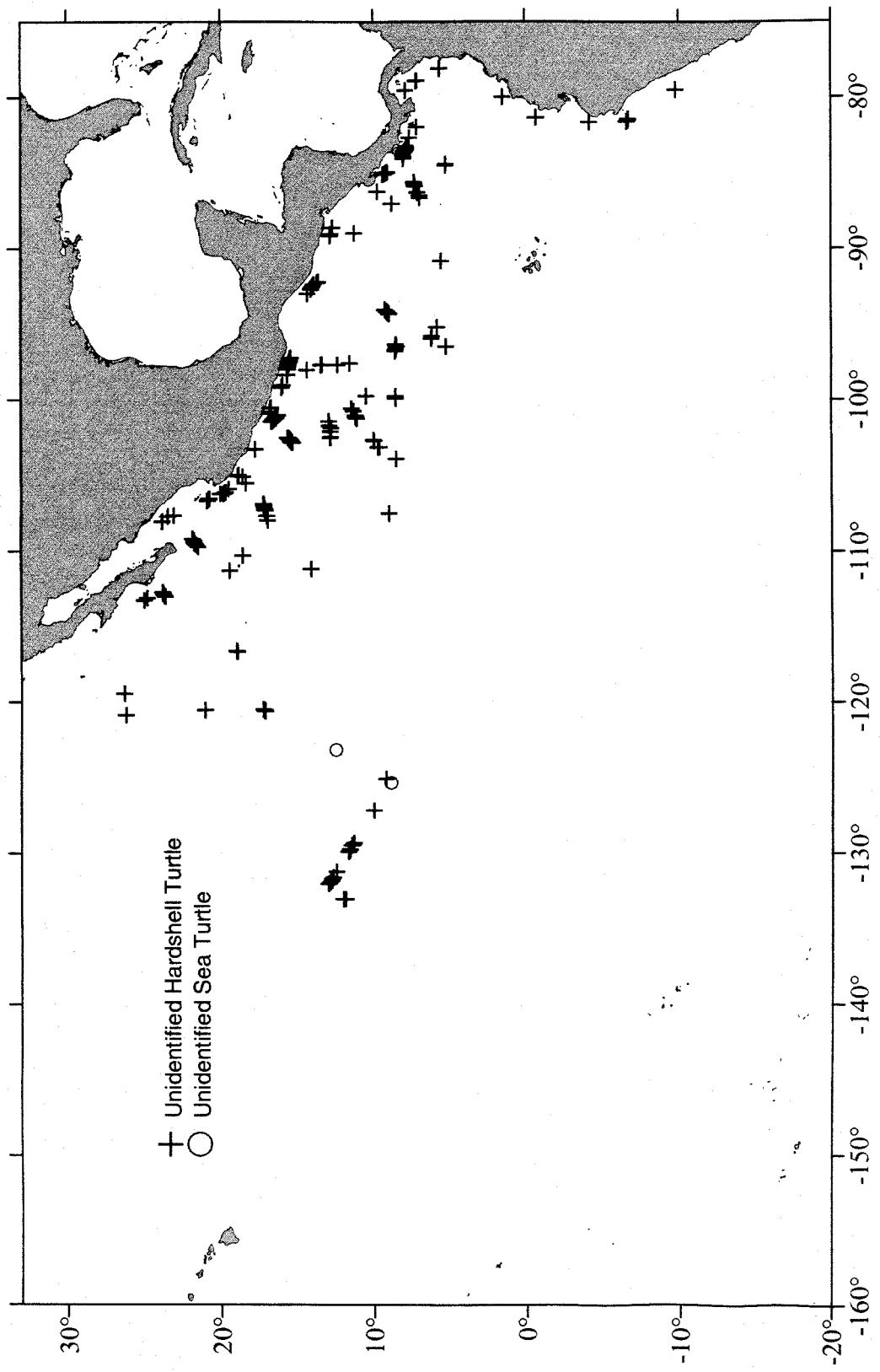


Figure 5. Locations of unidentified hardshell turtles (Cheloniidae) and unidentified sea turtle sightings recorded from the *Jordan* and the *McArthur*, 28 July – 9 December 2000.

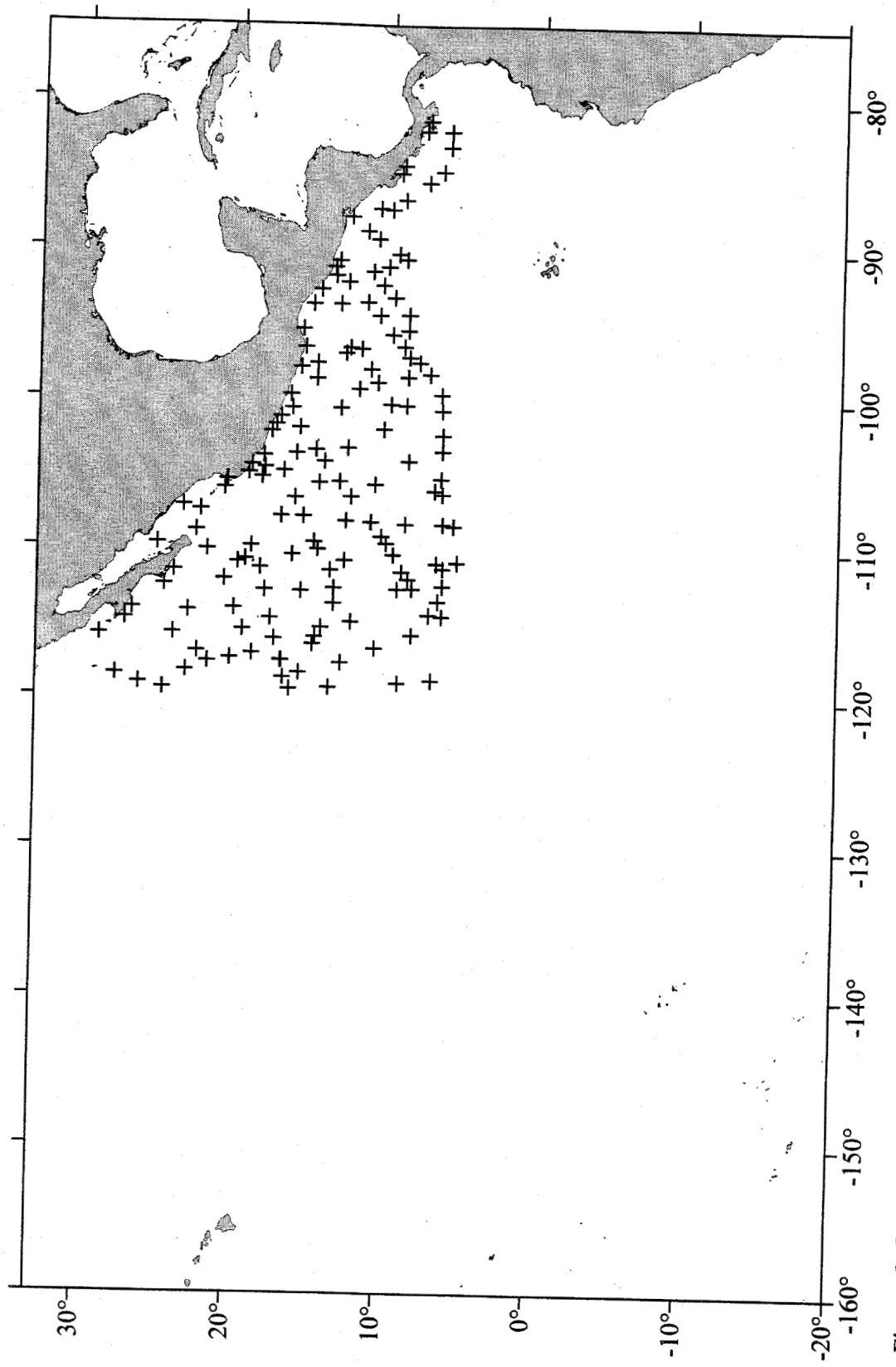


Figure 6. Locations of dipnet stations, *Jordan*, 29 July–9 December 2000.

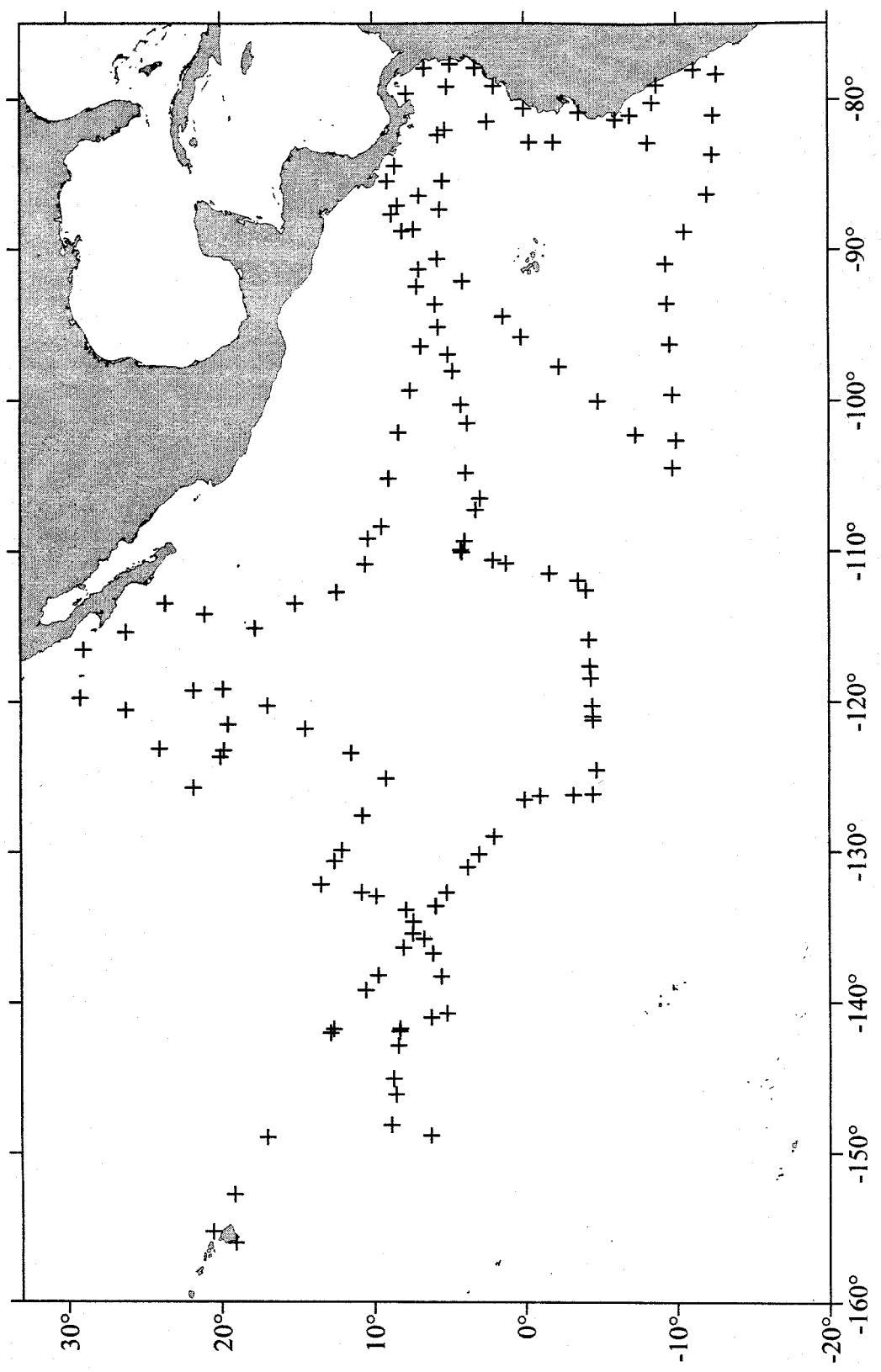


Figure 7. Locations of dipnet stations, *McArthur*, 28 July – 9 December 2000.

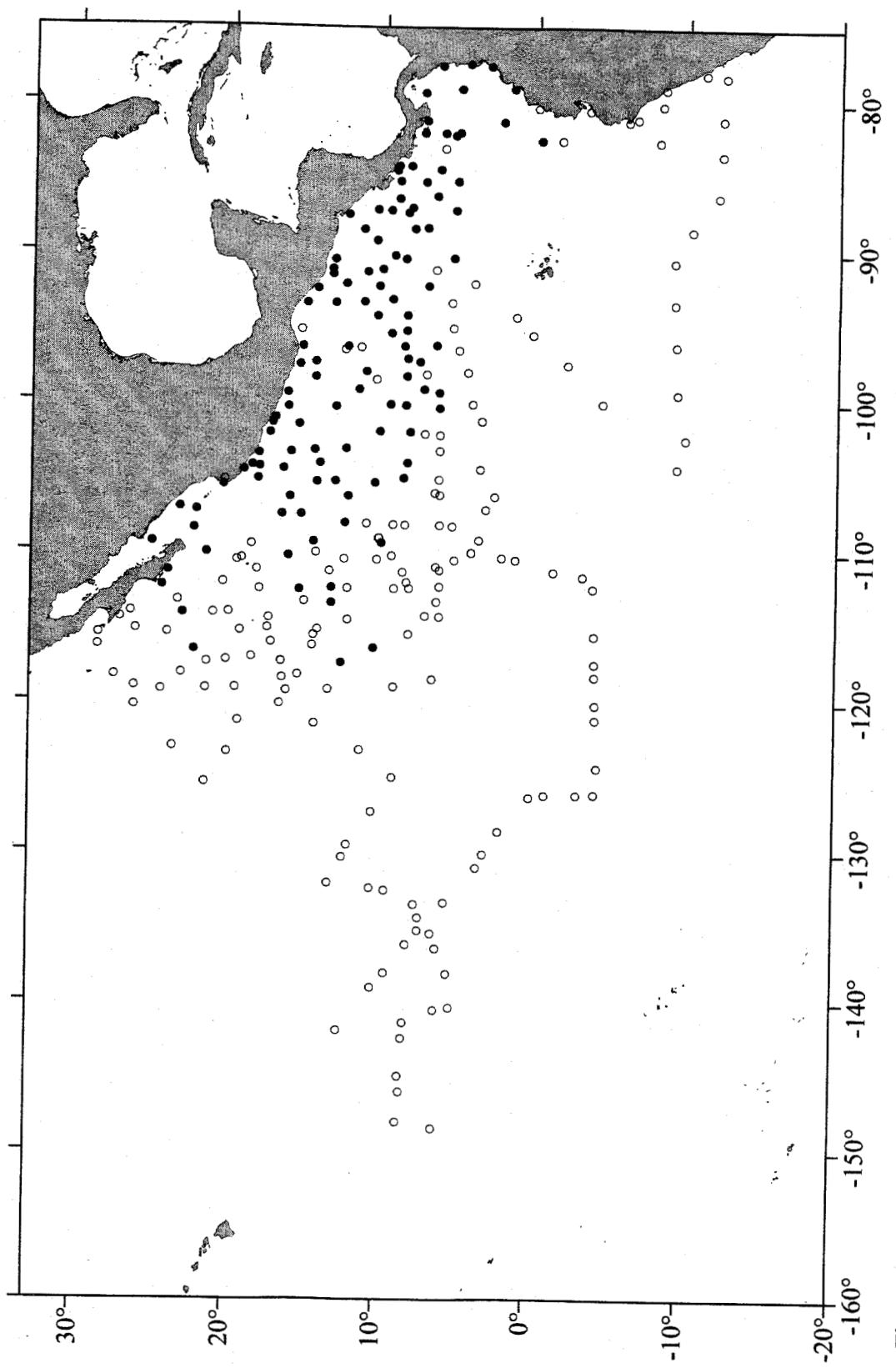


Figure 8. Locations of *Halobates sobrinus* (•) collected from the *Jordan* and the *McArthur*, 28 July – 9 December 2000. Open circles (○) indicate locations of dipnet stations where *H. sobrinus* were not collected.

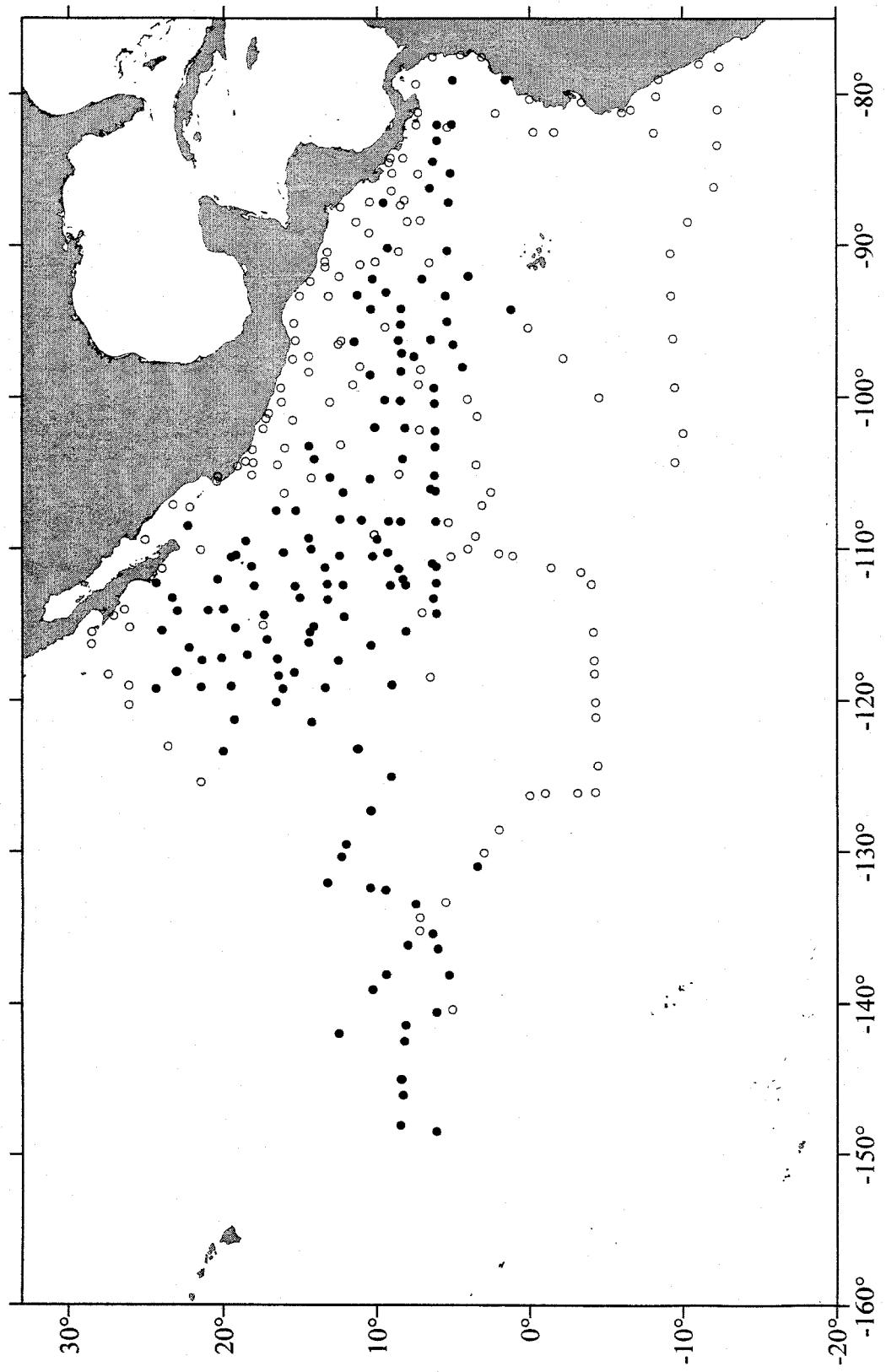


Figure 9. Locations of *Halobates micans* (●) collected from the *Jordan* and the *McArthur*, 28 July – 9 December 2000. Open circles (○) indicate locations of dipnet stations where *H. micans* were not collected.

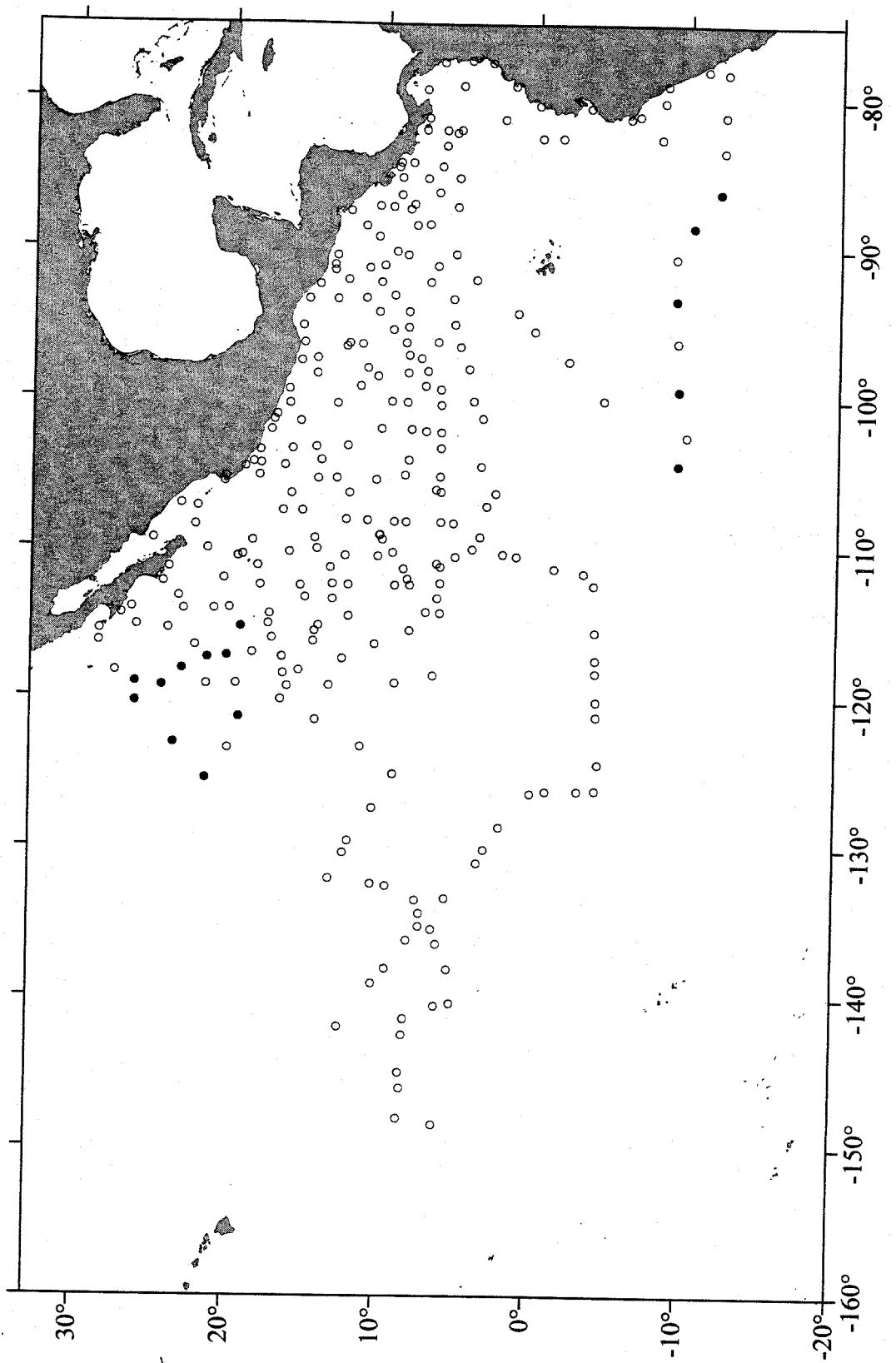


Figure 10. Locations of *Halobates sericeus* (●) collected from the *Jordan* and the *McArthur*, 28 July – 9 December 2000. Open circles (°) indicate locations of dipnet stations where *H. sericeus* were not collected.

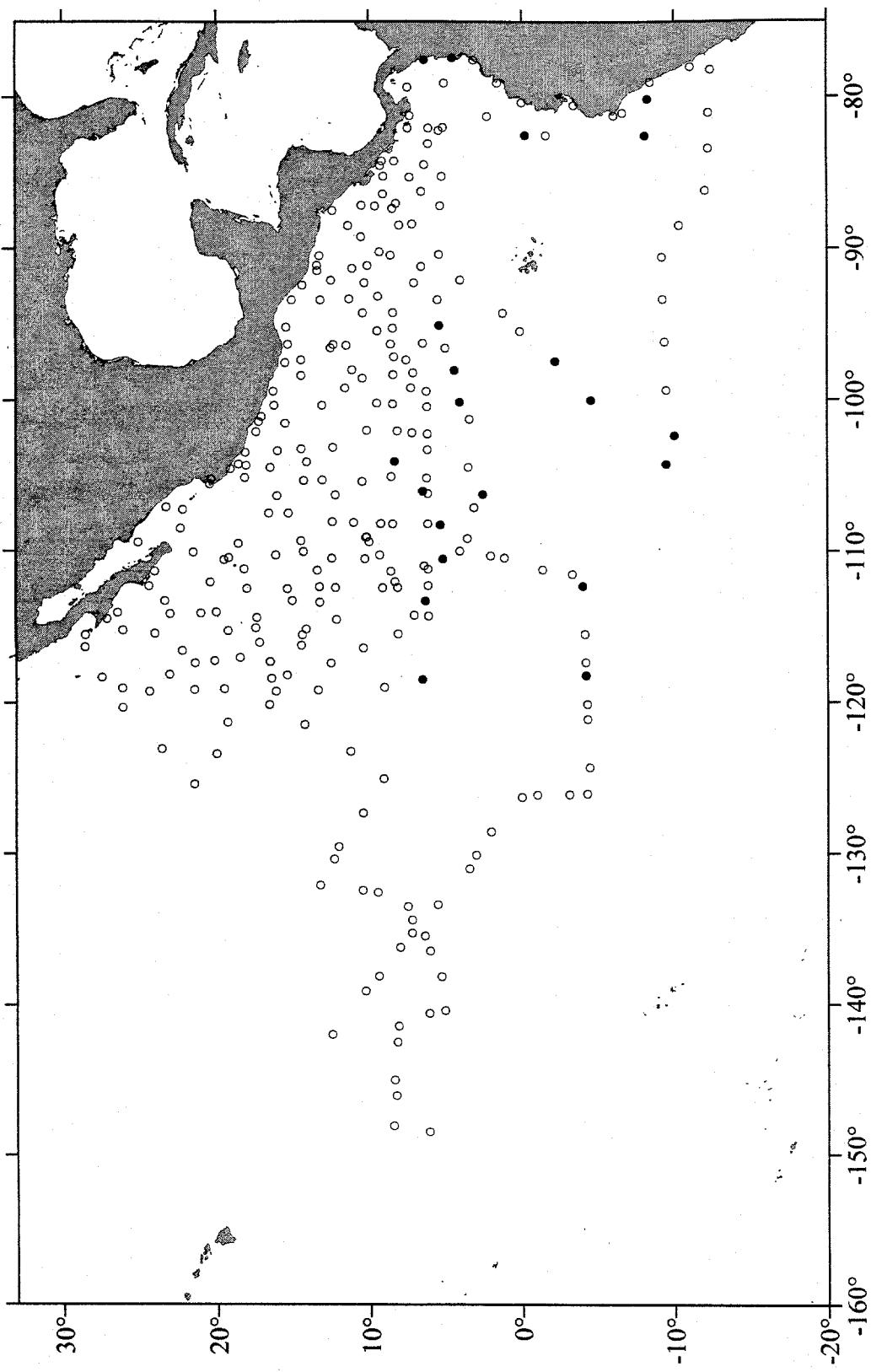


Figure 11. Locations of *Halobates splendens* (●) collected from the *Jordan* and the *McArthur*, 28 July – 9 December 2000. Open circles (○) indicate locations of dipnet stations where *H. splendens* were not collected.

## APPENDIX 1

## SCIENTIFIC PERSONNEL 2000

Name	Position	Affiliation	D. S. Jordan Leg #						McArthur Leg #				
			1	2	3	4	5	6	1	2	3	4	5
Lisa Ballance	Chief Scientist	SWFSC							x		x		
Eric Archer	Cruise Leader	SWFSC								x			
James Carretha	Cruise Leader	SWFSC									x		
Tim Gerrodette	Cruise Leader	SWFSC										x	
Sarah Mesnick	Cruise Leader	SWFSC									x		
Robert Pitman	Cruise Leader/Birder	SWFSC										x	
James Cotton	ID Specialist	SWFSC									x	x	
Doug Kinzey	ID Specialist	SWFSC									x	x	
Paula Olson	ID Specialist	SWFSC									x	x	
Richard Rowlett	ID Specialist	SWFSC									x	x	
Isabel Beasley	Mammal Observer	SWFSC									x	x	
Annie Douglas	Mammal Observer	SWFSC									x	x	
Kathy Hough	Mammal Observer	SWFSC									x	x	
Erin LaBrecque	Mammal Observer	SWFSC									x	x	
Laura Morse	Mammal Observer	SWFSC									x	x	
Juan Carlos Salinas	Mammal Observer	SWFSC									x	x	
Ernesto Vázquez	Mammal Observer	SWFSC									x	x	
Suzanne Yin	Mammal Observer	SWFSC									x	x	
Jay Barlow	Acoustician	SWFSC									x	x	
Xenia Brobeil	Acoustician	SWFSC									x	x	
Ann Chen	Acoustician	SWFSC									x	x	
Megan Ferguson	Acoustician	SIO									x	x	
Tom Norris	Acoustician	SWFSC									x	x	
Shannon Rankin	Acoustician	SWFSC									x	x	
Michael Force	Bird Observer	SWFSC									x	x	
Chris Hoefer	Bird Observer	SWFSC									x	x	
Brett Jarrett	Bird Observer	SWFSC									x	x	

Appendix 1 continued.

Name	Position	Affiliation	D. S. Jordan Leg #						McArthur Leg #
			1	2	3	4	5	6	
Sophie Webb	Bird Observer	SWFSC	x	x					
Roy Dehart	Helicopter Mechanic	AOC	x	x	x	x	x	x	
Ron Hegelson	Helicopter Mechanic	AOC							
Debora Barr	Helicopter Pilot	AOC							
Dave Gardner	Helicopter Pilot	AOC							
Julie Helmets	Helicopter Pilot	AOC							
Ron Dotson	Oceanographer	SWFSC			x	x	x	x	x
Dave Griffith	Oceanographer	SWFSC			x	x	x	x	x
Amy Hays	Oceanographer	SWFSC			x	x	x	x	x
Kerry Kopitsky	Oceanographer	SWFSC			x	x	x	x	x
Pierre Malan	Oceanographer	SWFSC			x	x	x	x	x
Dagmar Merkle	Oceanographer	SWFSC			x	x	x	x	x
Valerie Philbrick	Oceanographer	SWFSC	x	x					x
John Brandon	Photogrammetrist	SWFSC	x	x					x
Katie Cramer	Photogrammetrist	SWFSC	x	x					x
Jim Gilpatrick	Photogrammetrist	SWFSC	x	x					x
Morgan Lynn	Photogrammetrist	SWFSC	x	x					x
Wayne Perryman	Photogrammetrist	SWFSC	x	x					x
Charles Stinchcomb	Photogrammetrist	SWFSC	x	x					x
Ruth Bello	Visiting Scientist	IMARPE, Peru							
Nelson Fabian	Visiting Scientist	DIMAR, Colombia							
Guillermo Jiménez	Visiting Scientist	INP, Mexico							
Nathan Lovejoy	Visiting Scientist	UC Berkeley							
Julie Oswald	Visiting Scientist	SIO							
Gladys Torres	Visiting Scientist	INOCAR, Ecuador							
Rueben Valenzula	Visiting Scientist	INP, Mexico	x						

<sup>1</sup> SWFSC - Southwest Fisheries Science Center; AOC - Aircraft Operations Center, National Oceanic and Atmospheric Administration; DIMAR - Armada Nacional - Dirección General Marítima; INP - Instituto Nacional de la Pesca; IMARPE - Instituto del Mar del Perú; INOCAR - Instituto Oceanográfico de la Armada de Ecuador; SIO - Scripps Institution of Oceanography.

## **RECENT TECHNICAL MEMORANDUMS**

Copies of this and other NOAA Technical Memorandums are available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22167. Paper copies vary in price. Microfiche copies cost \$9.00. Recent issues of NOAA Technical Memorandums from the NMFS Southwest Fisheries Science Center are listed below:

- NOAA-TM-NMFS-SWFSC-294 Identification manual for dietary vegetation of the Hawaiian green turtle *Chelonia mydas*.  
D.J. RUSSELL and G.H. BALAZS  
(June 2000)
- 295 A comparative analysis of humpback whale songs recorded in pelagic waters of the eastern North Pacific: preliminary findings and implications for discerning migratory routes and assessing breeding stock identity.  
T. NORRIS, J. JACOBSEN, and S. CERCHIO  
(June 2000)
- 296 Seasonal variability of global mixed layer depth from WOD98 temperature and salinity profiles.  
G.I. MONTEREY and L.M. deWITT  
(July 2000)
- 297 The physical oceanography off the California coast during May-June, 1998: A summary of CTD data from pelagic juvenile rockfish surveys.  
K.M. SAKUMA, F.B. SCHWING, M.H. PICKETT, D. ROBERTS and S. RALSTON  
(August 2000)
- 298 Summary of seabird, marine turtle, and surface fauna data collected during a survey in the eastern tropical Pacific ocean, July 30 - December 9, 1998.  
P.A. OLSON, R.L. PITMAN, L.T. BALLANCE, and S.B. REILLY  
(August 2000)
- 299 The physical oceanography off the Central California coast during March-April and May-June, 1990: A summary of CTD data from pelagic juvenile rockfish surveys.  
K.M. SAKUMA, F.B. SCHWING, M.H. PICKETT, and S. RALSTON  
(September 2000)
- 300 U.S. Pacific marine mammal stock assessments: 2000.  
K.A. FORNEY, J. BARLOW, M.M. MUTO, M. LOWRY, J. BAKER, G. CAMERON, J. MOBLEY, C. STINCHCOMB, and J.V. CARRETTA  
(December 2000)
- 301 Summary of seabird, marine turtle, and surface fauna data collected during a survey in the eastern tropical Pacific ocean, July 28 - December 9, 1999.  
P.A. OLSON, R.L. PITMAN, L.T. BALLANCE, K.R. HOUGH, P. DUTTON, and S.B. REILLY  
(March 2001)
- 302 AMLR 1999/2000 field season report, objectives, accomplishments and conclusions.  
J.D. LIPSKY (editor)  
(March 2001)
- 303 Marine mammal data collected during a survey in the eastern tropical Pacific Ocean aboard the NOAA ships *McArthur* and *David Starr Jordan*, July 28 - December 9, 2000.  
D. KINZEY, T. GERRODETTE, A. DIZON, W. PERRYMAN, P. OLSON, and S. RANKIN  
(May 2001)